No. 18-422

In the
Supreme Court of the United States

ROBERT A. RUCHO, *et al.*,

Appellants,

v.

COMMON CAUSE, *et al.*,

Appellees.

On Appeal From the United States District Court for the Middle District of North Carolina

JOINT APPENDIX
Volume II of II

EMMET J. BONDURANT
Counsel of Record
BONDURANT, MIXSON & ELMORE, LLP
3900 One Atlantic Center
1201 W. Peachtree Street
Atlanta, GA 30309
(404) 881-4100
bondurant@bmelaw.com

Counsel for Common Cause

PAUL D. CLEMENT
Counsel of Record
ERIN E. MURPHY
ANDREW C. LAWRENCE
KIRKLAND & ELLIS LLP
655 Fifteenth Street, NW
Washington, DC 20005
(202) 879-5000
paul.clement@kirkland.com

Counsel for Appellants

(Additional Counsel Listed on Inside Cover)

February 8, 2019

Jurisdictional Statement Filed October 1, 2018
Jurisdiction Postponed January 4, 2019

Paul March Smith
Counsel of Record
Campaign Legal Center
1411 K Street, NW
Suite 1400
Washington, DC 20005
(202) 736-2200
psmith@campaignlegalcenter.org

Counsel for League of Women Voters of North Carolina, et al.

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Declaration of Walter L. Salinger (July 10, 2018)

I, Walter L. Salinger, under penalty of perjury, declare the following:

1. I am a recent Director of the League of Women Voters of North Carolina ("LWVNC"), a plaintiff in the above captioned case. I just left my role on the Board of Directors as of July 1, 2018.

2. In that role, among other things, I monitored and analyzed our statewide membership database. Because of my deep familiarity with that database, I continue to assist the co-Presidents and Board in issues relating to member data, and was asked to provide this declaration because of that familiarity.

3. I am authorized to speak for the LWVNC in this case.

4. I am aware that in this litigation, the Defendants have stipulated to the fact that the League of Women Voters of North Carolina has members in each of the state's thirteen congressional districts, and that it has members in each of those districts who are registered as Democrats, support and vote for Democratic candidates, and have an interest in furthering policies at the national level that are consistent with the Democratic Party platform. I have reviewed that stipulation, which has been marked as Exhibit 4080.

5. I was asked by my attorneys in this case to provide more information as it relates to that stipulation. Specifically, I was asked to clarify some actual precincts within each of those congressional districts, in which those referenced LWVNC members specifically lived. As I understand it, this information

may be used to help the court confirm that the LWVNC does indeed have standing to litigate this case.

6. Based on my review and comparison of the LWVNC membership database and with publicly available information in the North Carolina voter registration database, I am personally aware of the following facts:

a. At least one member of the League of Women Voters of North Carolina lives in Precinct 20-11 in Wake County, is registered to vote as a Democrat and regularly votes in Democratic primaries;

b. At least one member of the League of Women Voters of North Carolina lives in Precinct 01-04 in Wake County, is registered to vote as a Democrat, and regularly votes in Democratic primaries;

c. At least one member of the League of Women Voters of North Carolina lives in Precinct 074 in Forsyth County, is registered to vote as a Democrat, and regularly votes in Democratic primaries;

d. At least one member of the League of Women Voters of North Carolina lives in Precinct NCGR2 in Guilford County, is registered to vote as a Democrat, and regularly votes in Democratic primaries;

e. At least one member of the League of Women Voters of North Carolina lives in Precinct 13 in Wayne County, is registered to vote as a Democrat, and regularly votes in Democratic primaries;

f. At least one member of the League of Women Voters of North Carolina lives in Precinct "Eureka/Whispering Pines" in Moore County, is registered to vote as a Democrat, and regularly votes in Democratic primaries;

g. At least one member of the League of Women Voters of North Carolina lives in Precinct "West Newton" in Catawba County, is registered to vote as a Democrat, and regularly votes in Democratic primaries;

h. At least one member of the League of Women Voters of North Carolina lives in Precinct Drexel 01 in Burke County, is registered to vote as a Democrat, and regularly votes in Democratic primaries;

i. At least one member of the League of Women Voters of North Carolina lives in Precinct 020 in Mecklenburg County, is registered to vote as a Democrat, and regularly votes in Democratic primaries; and

j. At least one member of the League of Women Voters of North Carolina lives in Precinct 031 in Guilford County, is registered to vote as a Democrat, and regularly votes in Democratic primaries.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct to the best of my knowledge.

Executed on July 10, 2018

[handwritten: signature]
Walter L. Salinger

Dr. Hofeller Draft Map Summary
(League of Women Voters Plaintiffs' Exh. 4022)

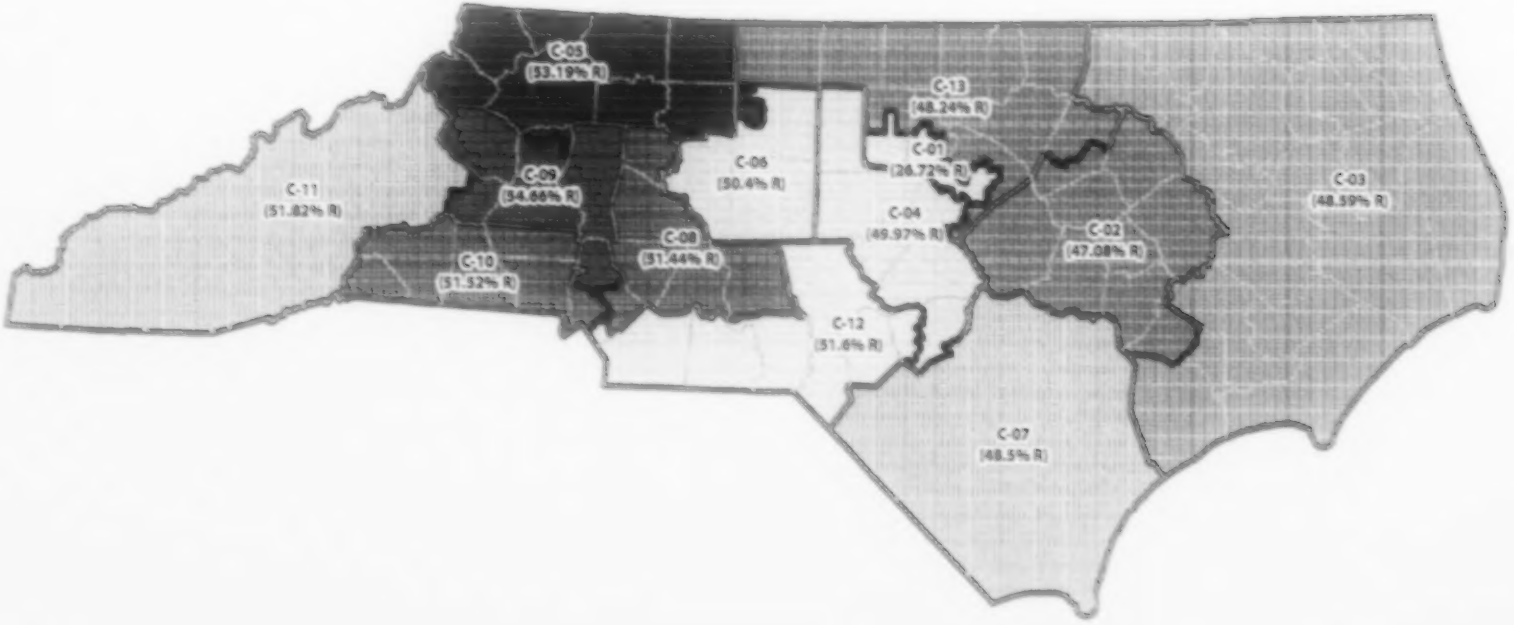
Plan Name	Total County Splits	Republican/ Democrat Seats using 20 election average	Average Reock Score
Congress ST-B	10	7R / 6D	0.41

Congress 17A Map With Election Data
(League of Women Voters Plaintiffs' Exh. 4023)

(See Insert Next Page)

Exhibit 4023: Congress 17A Map with Election Data

Plan 17A
7 Republican districts (20-race average)
Split counties: 10



LWV PLAINTIFFS' EXHIBIT
4023
1:16-CV-1164

Congress ST-B Map with Election Data
(League of Women Voters Plaintiffs' Ex. 4024)

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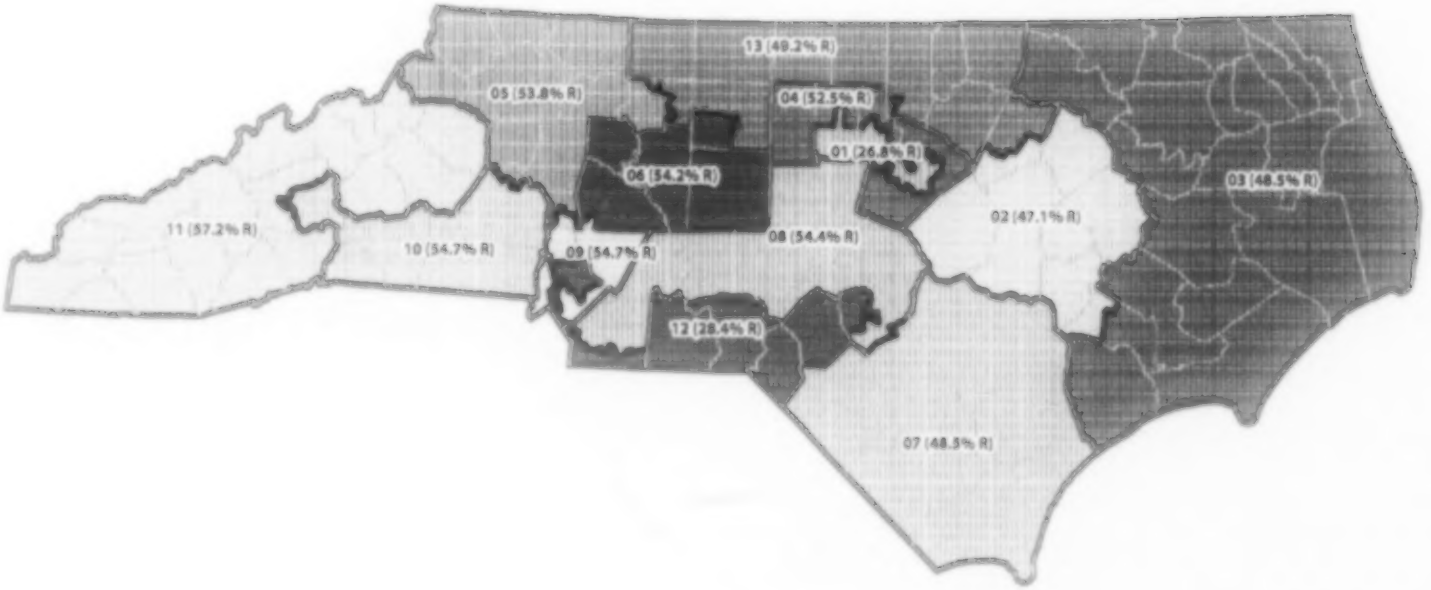
Exhibit 4024: Congress ST-B Map with Election Data

Plan STB
7 Republican districts (average of 20 races)
Split counties: 15



LWV PLAINTIFFS' EXHIBIT
4024
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Dr. Hofeller Buncombe County Map
(League of Women Voters Plaintiffs' Exh. 4066)

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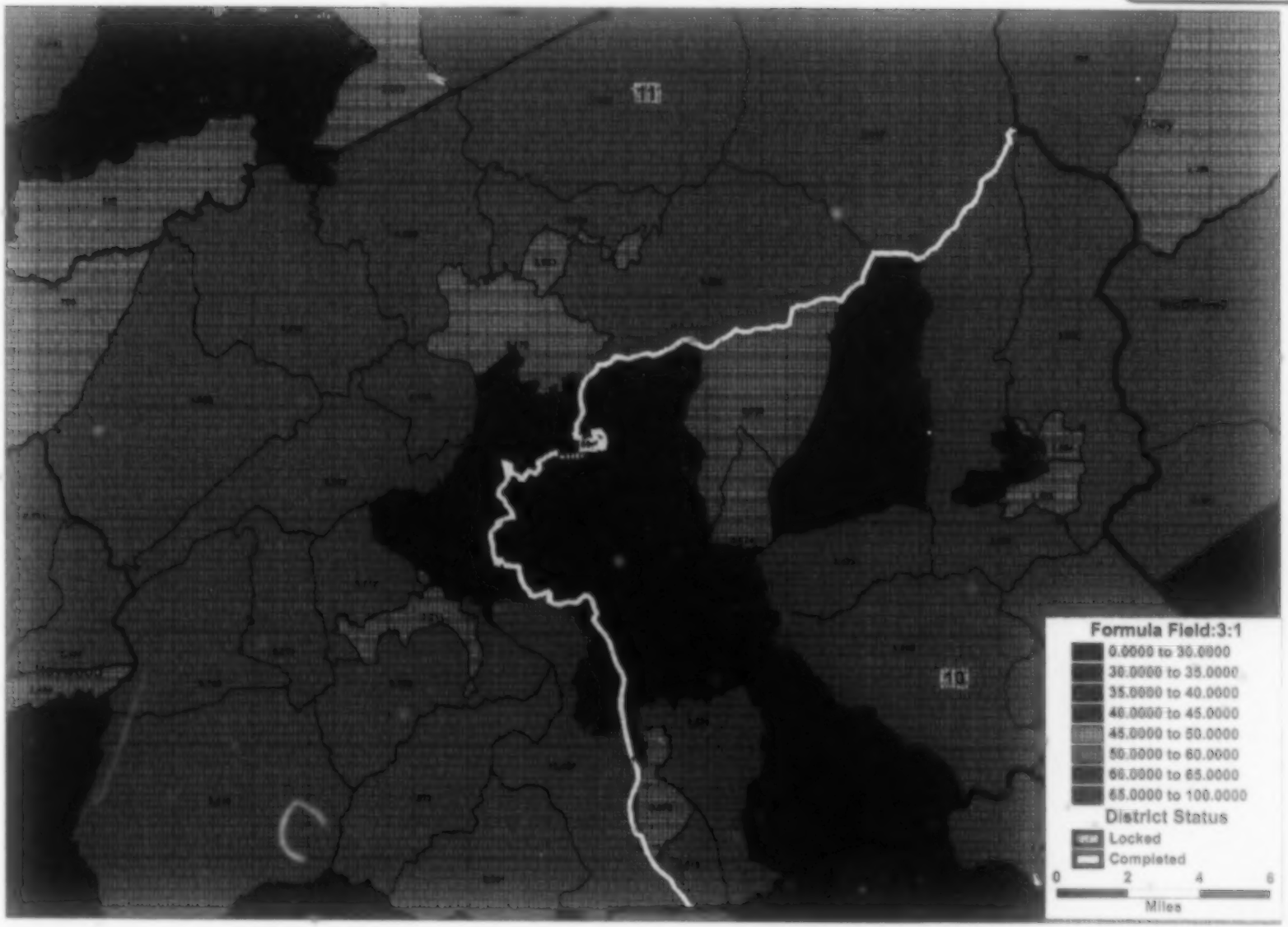
PLAINTIFFS' EXHIBIT 4066

1:16-CV-1164

Buncombe County



Dr. Hofeller Cumberland County Map
(League of Women Voters Plaintiffs' Exh. 4067)

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DEFENDANT'S
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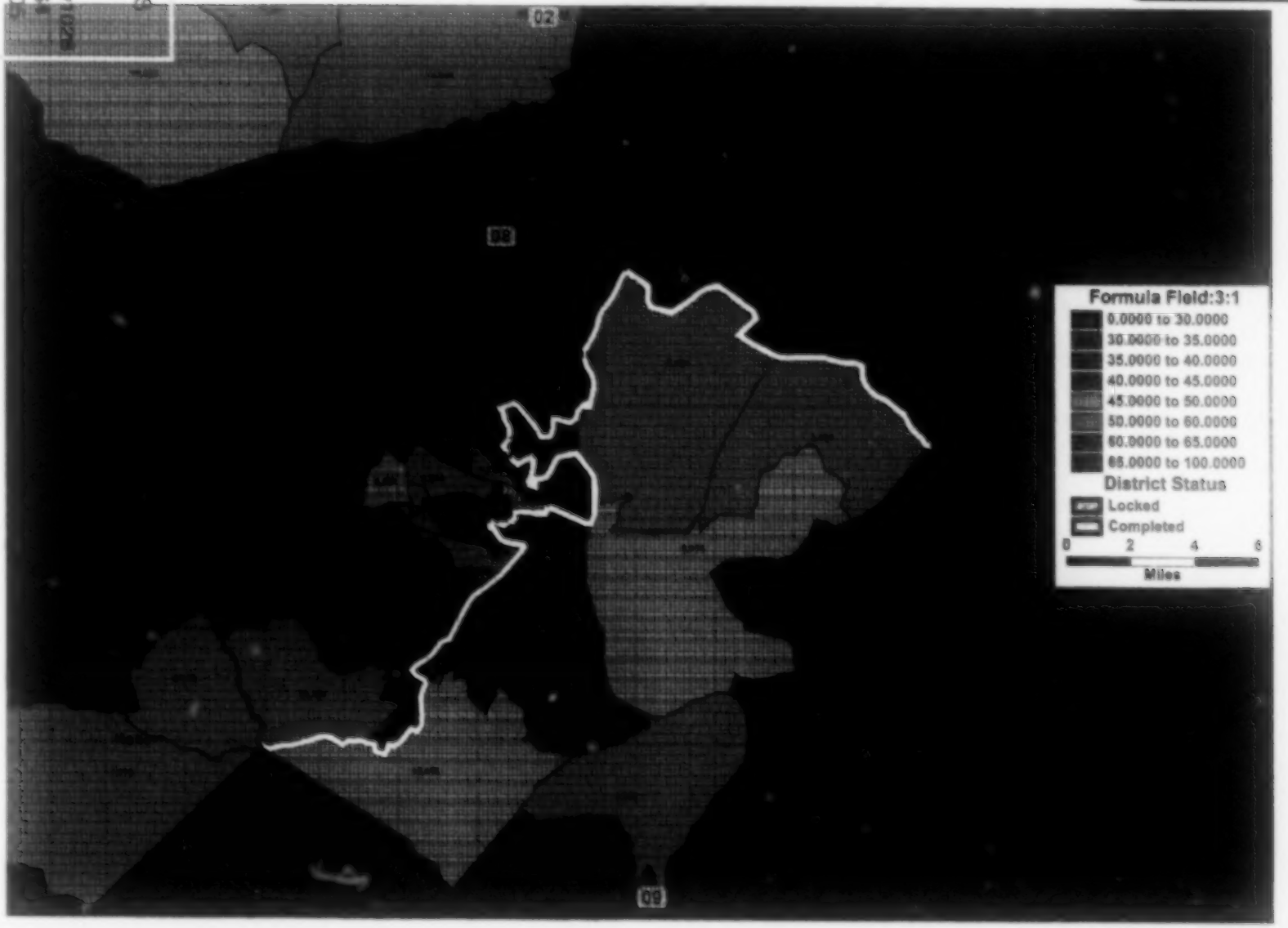
Case No. 16cv1626
16cv1164
Exhibit No. 5105

PLAINTIFFS'
EXHIBIT
4067
1:16-CV-1164

Cumberland County



Dr. Hofeller Guilford County Map
(League of Women Voters Plaintiffs' Exh. 4068)

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16cv116
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PLAINTIFFS'
EXHIBIT
4068
1:16-CV-1164

Guilford County

Dr. Hofeller Johnston County Map
(League of Women Voters Plaintiffs' Exh. 4069)

(See Insert Next Page)

PLAINTIFFS' EXHIBIT 4069 1:16-CV-1164

Johnston County

Dr. Hofeller Mecklenburg County Map
(League of Women Voters Plaintiffs' Exh. 4070)

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13
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45.0000 to 50.0000
50.0000 to 60.0000
60.0000 to 65.0000
65.0000 to 100.0000
District Status

Dr. Hofeller Pitt County Map
(League of Women Voters Plaintiffs' Exh. 4071)

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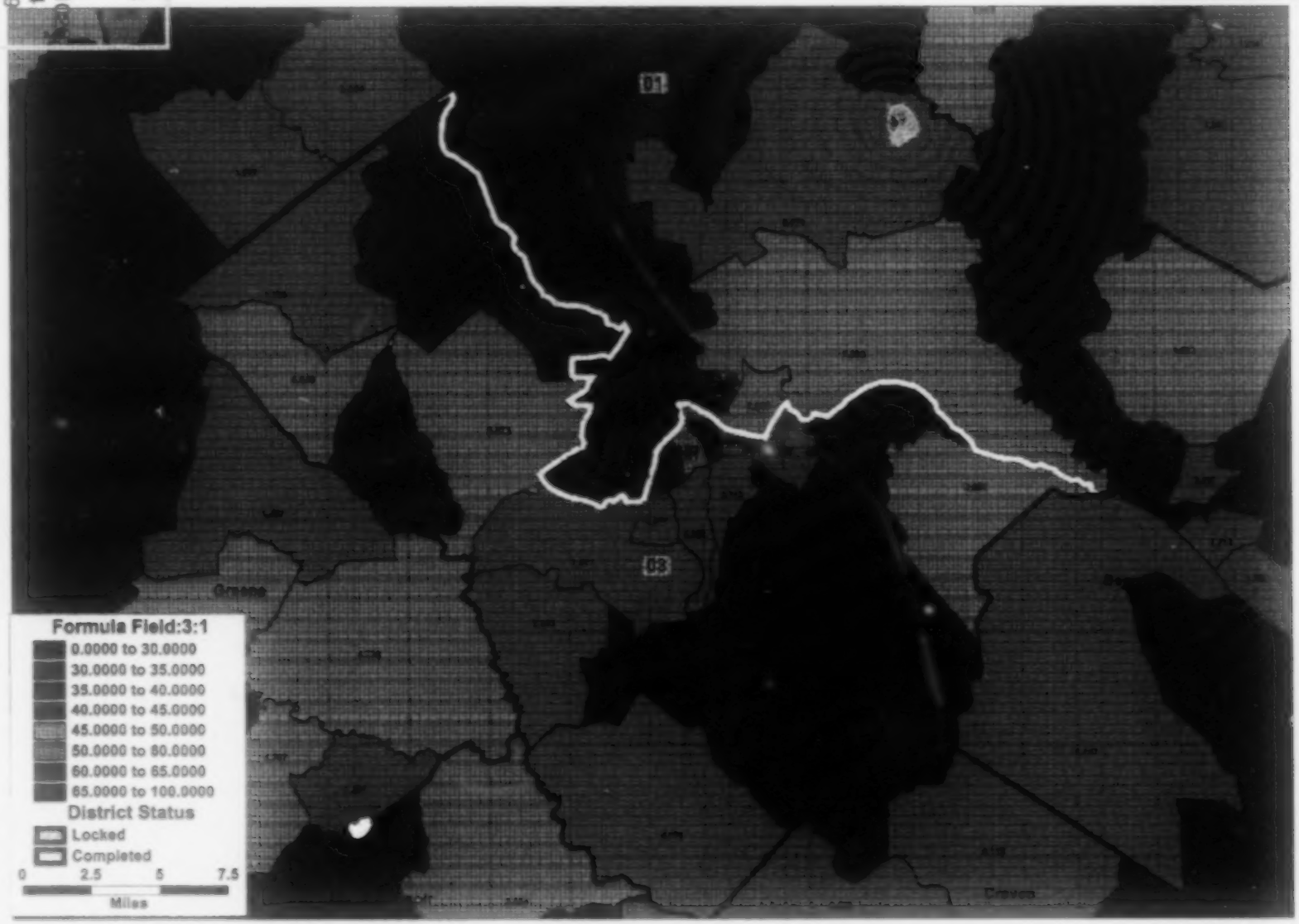
Pitt County



Dr. Hofeller Durham and Wake Counties Map
(League of Women Voters Plaintiffs' Exh. 4072)

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PLAINTIFFS'
EXHIBIT
4072
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Durham and Wake Counties

Dr. Hofeller Wilson County Map
(League of Women Voters Plaintiffs' Exh. 4073)

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Wilson County

PLAINTIFFS'
EXHIBIT
4073
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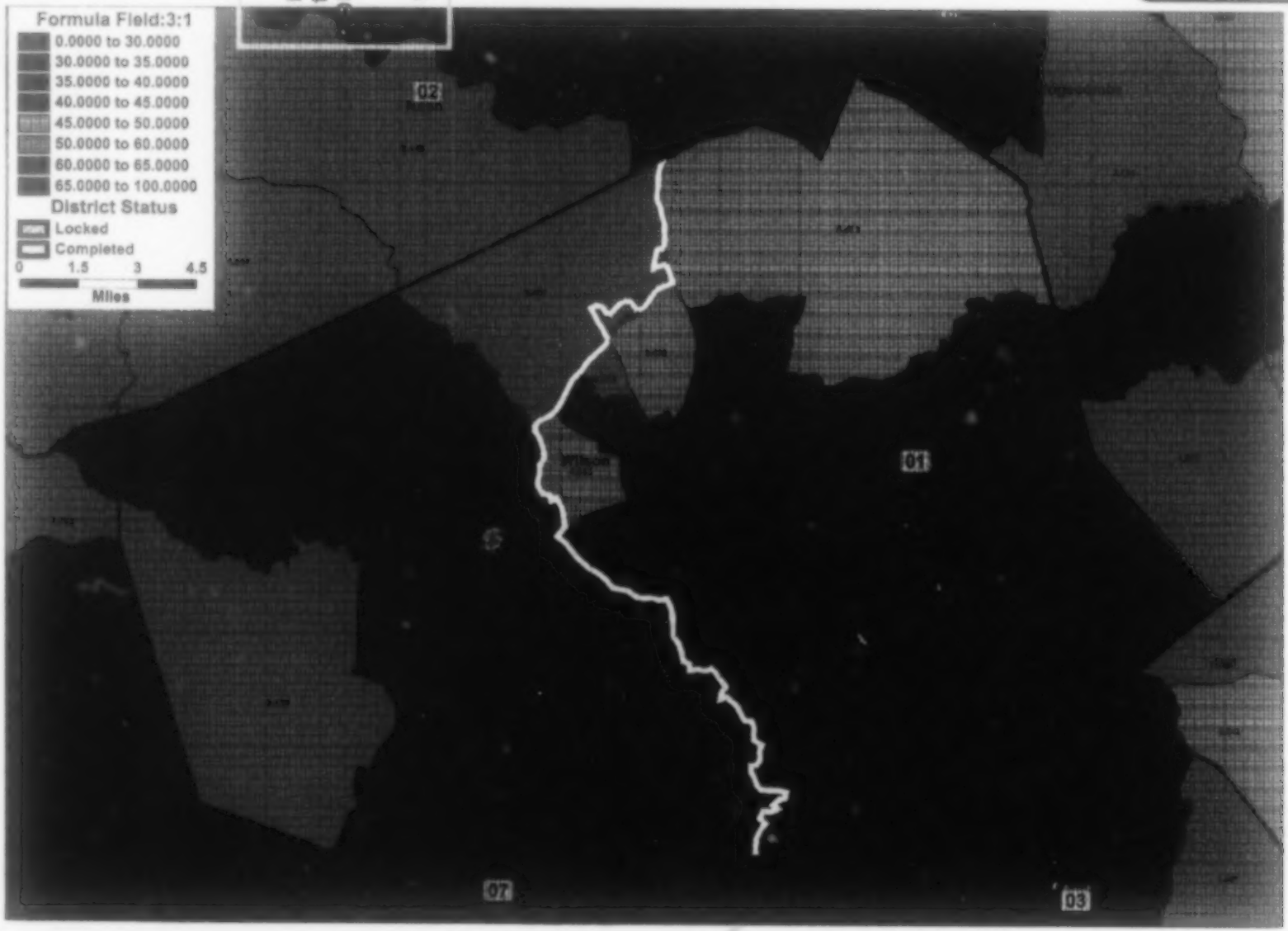

Dr. Hofeller Bladen County Map
(League of Women Voters Plaintiffs' Exh. 4074)

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PLAINTIFFS'
EXHIBIT
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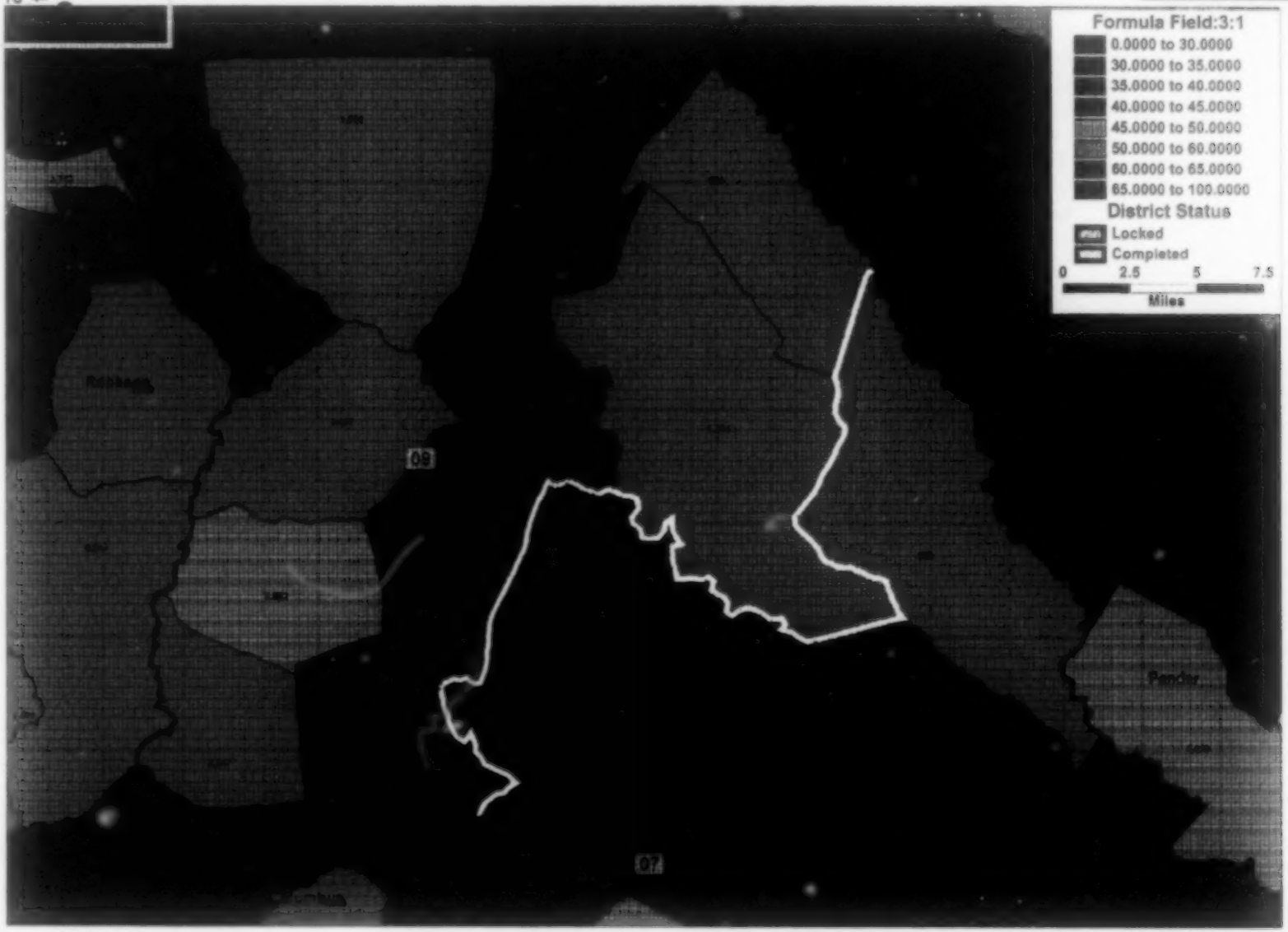
Bladen County



Dr. Hofeller Catawba County Map
(League of Women Voters Plaintiffs' Exh. 4075)

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16cv1164
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PLAINTIFFS'
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4075
1:16-CV-1164

Catawba County

Dr. Hofeller Iredell County Map
(League of Women Voters Plaintiffs' Exh. 4076)

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4076
1:16-CV-1164

FENDANT'S
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se No. 16cv
16cv116
hibit No. 511

Iredell County

Dr. Hofeller Rowan County Map
(League of Women Voters Plaintiffs' Exh. 4077)

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PLAINTIFFS'
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4077
1:16-CV-1164

DEFENDANT'S
EXHIBIT
Case No. 16cv1
16cv1164
Exhibit No. 5115

Rowan County

Excerpts from Joint Redistricting Committee, North Carolina General Assembly Extra Session on Redistricting (Feb. 16, 2016)

...

[47] ...

REP. LEWIS: Mr. Chairman, I would ask -- with your permission, I've asked the Sergeants at Arms to distribute the criteria labeled "Partisan Advantage." If you could direct the staff to read that, I'd be happy to speak on it.

SEN. RUCHO: Ms. Churchill, would you read the one on partisan advantage?

MS. CHURCHILL: "Partisan Advantage: The partisan makeup of the Congressional delegation under the enacted plan is 10 Republicans and 3 Democrats. The committee shall make reasonable efforts to construct districts in the 2016 contingent Congressional plan to maintain the current partisan makeup of North Carolina's Congressional delegation."

SEN. RUCHO: Representative Lewis, explain.

REP. LEWIS: Mr. Chairman, the explanation of this is reasonably simple. As we are allowed to consider political data in the [48] drawing of the maps, I would propose that to the extent possible, the map drawers create a map which is perhaps likely to elect 10 Republicans and 3 Democrats. I acknowledge freely that this would be a political gerrymander, which is not against the law.

SEN. RUCHO: All right. Members of the committee, any questions? Senator Blue?

SEN. BLUE: Just one, Mr. Chairman, and this is a point of order since you've got my friend the rules committee chairman up there. What are the rules under which this committee is operating, House or Senate? If it's the Senate and if it's neither, where do they come from, but if it's the Senate, aren't ayes and nays prohibited in committee votes?

SEN. APODACA: The chairs agreed we'd operate under the House rules, and I can tell you I wasn't here for that, but they did.

(Laughter.)

SEN. RUCHO: All right. Senator Blue?

SEN. BLUE: One follow-up.

SEN. RU CHO: Let me have your attention.

SEN. BLUE: Since I'm not familiar with the House rules anymore, there is a permitted [49] abstention in the ayes and nos under the House rules; is there not?

SEN. APODACA: Mr. Chairman?

SEN. RUCHO: Representative Starn, if you can respond to that question?

REP. STAM: I could. There is no such rule under House rules n ow or when Senator Blue was the Speaker of the House.

SEN. RUCHO: Senator Blue, did you get your answer?

SEN. BLUE: I got an answer.

(Laughter.)

SEN. RUCHO: Good. Thank you. Okay. Members of the committee, let's pay close attention to this. Sen at or McKissick?

SEN. MCKISSICK: In looking a t this particular criteria, I mean, certainly partisan advantage is a legitimate consideration, but I don't know why, based upon the number of Democratic registered voters, Republican registered voters and unaffiliated voters in this state we would want to ever sit and ingrain as a criteria for redistricting that we would only allow one party 3 seat s in Congress, and the other one, 10 in Congress, when not very long ago, before 2010, we [50] had 7 Democrats and 5 Republicans, so I'm trying to understand why you feel this would be fair, reasonable, and balanced in terms of voter registrations in this state as it is currently divided.

REP. LEWIS: Thank you for your question, Senator. I propose that we draw the maps to give a partisan advantage to 10 Republicans and 3 Democrats because I do not believe it's possible to draw a map with 11 Republicans and 2 Democrats.

(Laughter.)

SEN. MCKISSICK: Follow-up, if I could.

SEN. RUCHO: Follow-up.

SEN. MCKISSICK: Were you aware of the fact that in the 2012 election cycle, if you total the total number of votes received by Democrats running for Congress versus the total number of votes cast for Republicans running for Congress, that Democratic candidates had a higher number of total votes, but ended up with fewer seats? Were you aware of that factor in drawing up this criteria?

REP. LEWIS: I am aware, Senator -- first of all, thank you for your question. I am aware that there are numerous examples, especially [51] through the 2000s, when the majority of seats went t o a party that had the fewer votes. We elect our representatives based on a system of drawing districts and the people in those districts being able to vote. We do not elect at large. I know you're very much aware of that, and we will -- this will maintain that system.

SEN. MCKISSICK: Last follow-up, Mr. Chairman.

SEN. RUCHO: Follow-up. Last follow- up.

SEN. MCKISSICK: I would simply say this: If we were looking at a fair and reasonable division as a criteria moving forward, it wouldn't necessarily have to be an even division. It could -- obviously, since majority -- Republicans are a majority now, give Republicans a slight edge, but to come up with such an imbalance in a split I think is highly inappropriate. It's unfair. It does not recognize the way votes have been cast in this state as recently as 2012. It doesn't recognize the division of registered voters in this state between Democrats, Republicans, and Independents, and it's really a matter of political gerrymandering in the worst sense in which we can do so.

[52] Come up with something different. It could be 5 Democratic seats, and there's no reason why that couldn't be accomplished. It could be 6 Democratic seats and still give the Republicans an edge, but to say you're going to marginalize with only 3 seats as a criteria, let the voters decide.

REP. LEWIS: Well, sir, I definitely -- I thank you for that comment. Certainly we look forward to

receiving -- what I'm asking this committee to adopt is the maps that this -- that the chairs will present to this committee absent a stay arriving from the Court. Certainly the members of this committee that don't feel this balance is appropriate can certainly offer their own maps for consideration.

SEN. RUCHO: Representative Lewis, in the case Senator McKissick brought forth, if you see some districts that tend to have a larger voter turnout than others, that could easily explain what Senator McKissick described. Am I not correct?

REP. LEWIS: Yes, sir. I think that's a constant variable in this. If you have an area that has a lot of contested races, those areas tend to produce more folks to the polls. If you have -- you know, we don't want to get into the Electoral [53] College, but I can remember this debate's been going on since 2000 because of the use -- you know, there are times -- do you maximize or, for lack of a more polite term, do you pump up or boost up votes in certain areas to try and create the larger cumulative total, or do you file, run, and win in the districts in which you live? Our system has historically been the latter.

SEN. RUCHO: I have a follow-up there. Senator McKissick, go ahead.

SEN. MCKISSICK: Yeah. Simply this: I think what voters want are more competitive districts, more competitive districts where they have a clear choice between a Democrat, a Republican, and perhaps an unaffiliated candidate that's running, but not ones that are gerrymandered to give one party or the other just a clear partisan advantage. More competitive districts, I support completely, but that means

drawing the maps in a way where you're not from the outset establishing criteria that gives one party an unfair advantage.

SEN. RUCHO: Representative Lewis?

REP. LEWIS: Mr. Chairman, the only thing that I could add is that we want to make clear that [54] we to the extent are going to use political data in drawing this map, it is to gain partisan advantage on the map. I want that criteria to be clearly stated and understood. I have the utmost respect for those that do not agree with this particular balance.

I will say -- and the gentleman from Durham did not say this, but I will say that during the public comment yesterday, more than one speaker referred to, "Can't we just draw them where there's 5 this way or 6 that way?" That is partisan gerrymandering if you're drawing 5 and 7 or 6 and -- whatever it is. I'm making clear that our intent is to use -- is to use the political data we have to our partisan advantage.

SEN. RUCHO: Representative Michaux?

REP. MICHAUX: Yeah. Mr. Chairman, you know if we were where you are today and we came up with this idea, you-all would be jumping all over the place, trying to dissuade us from that. First you want to -- you really want to dissuade race from being put in here. Now you want to make sure that you keep your 10 to 3 advantage, the same situation that got you in trouble before, and now you're going to -- what you're telling us is, "We [55] want you to do this, and you vote for it, and this is the way it's going to be," period, end of report.

SEN. RUCHO: Okay. There was no question, I don't think, so -- unless you want to respond to his comment.

REP. LEWIS: No.

SEN. RUCHO: Okay. I've got Representative Stam first.

REP. STAM: Yes. I'd like to share a statistic that I haven't used in about 10 years, but I'll tell you why. During the last redistricting by the other party in 2004, I did jump up and down because I saw what was coming. I n the elect ion of 2004 for the House -- write these statistics down -- 52 percent of the voters chose the Republican candidate, 44 percent, the Democratic candidate, and 4 percent, Libertarian. Well, that should be a landslide for Republicans, but it ended up that we were in the minority, 57 to 63.

The reason I stopped using those type of statistics is I realized that it can be totally skewed by whoever happens to not have a candidate opposing that person. That shows a huge advantage. [56] For example, near a military base, they have much fewer voters than the population -- in other words, it's a bogus statistic, so I don't use it anymore.

SEN. RUCHO: Thank you. I've got Representative Hager.

REP. HAGER: Thank you, Mr. Chairman. You know I haven't been here long, but I guess in the House, I've become one of the more senior members with my colleagues that came in in 2011, but, you know, I got to thinking -- and I have the utmost respect for Senator McKissick and Representative Michaux, but, you know, if I beat my dog every day for 4 or 5

years and then I quit doing it and I told David to quit beating his dog, you'd consider me a little bit hypocritical, wouldn't you, David?

If you look at that map on the wall and look a t the 1992 map and look at District 10 and District 1, District 10 is my district now. Look a t where we've come with District 10 since then. I mean, it's just -- it's amazing to me that we can argue that we shouldn't -- that the folks that have been here f or a long time can argue that we shouldn't gerrymander these on political reasons, and they' re some of the same people that developed [57] that map of District 1 and District 10 in 1992.

SEN. RUCHO: Thank you. Any additional questions? Senator Smith-Ingram?

SEN. SMITH-INGRAM: Thank you, Mr. Chair. Can you be specific as to what constitutes partisan advantage? Do we have to tie it to a number?

REP. LEWIS: No, ma'am, but I will -- first of all, thank you for the question. To perhaps expound on it a bit, this would -- this would contemplate looking at the political data, which was an earlier criteria adopted by this committee, and as you draw the lines, if you're trying to give a partisan advantage, you would want to draw the lines so that more of the whole VTDs voted for the Republican on the ballot than they did the Democrat, if that answers your question.

SEN. SMITH-INGRAM: I think that --

SEN. RUCHO: Follow-up?

SEN. SMITH-INGRAM: Thank you. Follow-up. It answers about 50 percent of my question. If I could ask you another one, maybe a different way? You threw

out some numbers. Would there not be partisan advantage with 8/5?

REP. LEWIS: Thank you for that question, Senator. I would point out that indeed, you could [58] use political numbers to draw a partisan -- to draw districts in which 8 Republicans would win or 5 Democrats. I'm saying to the extent that you can, make it 10/3.

SEN. SMITH - INGRAM: Last follow-up.

SEN. RUCHO: Last follow-up.

SEN. SMITH - INGRAM: Just a statement. I am concerned that we are trying to mimic the outcome of the previous election that never existed for a very long time in North Carolina until this district was redrawn in 2011. The challenge here is we are balancing where we are with where we have been historically, but at the end of the day, we are elected to come together, to work together, to serve the constituents and citizens of North Carolina. This is one of the concerns resonated yesterday, and many of us have it here. We are drawing these lines so that we get to pick our voters as opposed to them choosing us. I t is unfair. I t should not be perpetuated in this process, and I will not be supporting it.

SEN. RUCHO: Thank you. Representative Jones?

REP. JONES: Thank you, Mr. Chair. I appreciate it. I want to say how much I have [59] enjoyed this discussion about -- about gerrymandering. You know, that's a word that seems to me, as someone who has lived in North Carolina for all my life and has really kind of studied the political process particularly over the last few decades, a word that was never really used

until somehow the Republicans came to a majority in 2010.

Just as we're taking this little trip down memory lane for just a moment, I -- I remember things like multi-member districts in North Carolina when we were drawing the legislature. I thought what an extreme opportunity that was to gerrymander.

I saw it happen in my own area where, you know, we couldn't do single -member districts. We couldn't even do double-member districts. Sometimes it had to be three- or four-member districts in order for the political party in charge at the time, which was the Democratic Party, to gain a political advantage, so Representative Lewis, I appreciate your honesty as you come forward today, and we-- and we explain that political gerrymandering I guess is what it is, but I just find it very interesting to hear some of the comments coming from some of the avenues that we're [60] hearing them come from today. We never heard those comments for decades and decades and decades in North Carolina, whether it was the media, whether it was the majority party, whomever, and so I guess the process is what it is.

I 'm glad that we have had some court decisions that have led to what I think is a lot less gerrymandering than what we had in prior decades, where we -- now we do have single-member districts. Now we do have where we don't just split counties in any possible way, and we have the pod system and things like that, so I really take offense when I hear those that say that somehow the political gerrymandering of today is greater than somehow it was in prior years, when anybody that goes back and

studies the history knows that that's simply not the case.

That's my comment, and I will ask I guess a ques t ion for you, Representative Lewis. Is it possible that people might choose to vote for a candidate that is of a different political party than what their political affiliation is?

REP. LEWIS: Well, thank you f or that question, Representative Jones. Of course it is. I mean, we all offer ourselves, and the voters in [61] our districts decide that we best represent what we believe the direction of the government should be and that's how they cast their votes, so certainly a person is free to vote ever how they choose to vote.

REP. JONES: Well, that's what I think, and I think regardless how you draw these districts -- you know, I come from an area where I can remember a time where voting f or the Democratic party was extremely -- extremely high, and that time has changed, and those votes have changed. A lot of people that I can tell don't necessarily vote f or the same part y that they're registered, and so I -- you know, I think we ought to respect the voters as individuals, and whether they're registered Democrat, Republican, Libertarian, unaffiliated, whatever, recognize that they do have an opportunity to vote for any candidate that is on the ballot before them. I appreciate your answer, and I appreciate your hones t y and integrity and going forward with the process.

SEN. RUCHO: Thank you, Representative Jones. Senator Clark?

SEN. CLARK: Thank you, Mr. Chairman. I'm having difficulty understanding why I should [62]

agree to vote for maps to bake in partisan advantage that was achieved through the use of unconstitutional maps. Could you explain that to me?

REP. LEWIS: Well, to be clear, sir, we -- we are proposing that the maps that are drawn now under this criteria which we have passed a plank of, and continue to move forward, one of the goals in drawing the map will be to preserve the 10/3. With all due respect, I've listened to this, and we can of course continue to discuss this as long as the committee wants to. It's always sort of amazed me that if the map elect s one side, the other side considers -- considers it a gerrymander, and something bad. If it elects their side, they consider it a work of art, and good government, so this is saying that one of the goals will be to elect -- to speak directly to your point, the goal is to elect 10 Republicans and 3 Democrats.

SEN. RUCHO: Thank you. Representative Lewis, there was a comment earlier about the districts, the 13 districts that exist, 10 presently Republican, and 3 Democrat, and under the circumstances, could you explain a little bit about the makeup of the Republican districts and who [63] they're composed of, and what is necessary for that Republican to win an election?

REP. LEWIS: Thank you for the question, Mr. Chairman. First of all, it would be necessary to go back and review the stat packs and whatnot from the 2011 districts, which are online if anybody would like to do that, but to the best of my knowledge, Republicans hold no majority as far as voter registration in any of those districts.

It's also -- well, and it is firmly my belief that it's the responsibility of each of the political parties to

nominate quality candidates who can appeal to the entire political spectrum. It was pointed out yesterday during the public hearing that the unaffiliated ranks in our state continue to grow. If you don't get them -- if you don't get a large percentage of the unaffiliated vote in most of our districts, you're not going to win, and so I would say that you are required to have a good-quality candidate that appeals to the political expectations of the majority of the folds in that district.

I can go back, and we can go through some of the points. I do still -- I actually maintain that the districts that we have now are largely [64] competitive. I pointed out before that in the race for attorney general that Attorney General Cooper won nearly all of these. We can go back through this 2011 debate if we'd like to, but I would again maintain that you've got to put forward a good candidate that appeals to the majority of folks, and that the majority of folks in these districts in the enacted plan are not registered Republicans. In fact, to the best of my knowledge, in all but perhaps one, we are the minority in all of the districts.

SEN. RUCHO: Thank you. Okay, Representative Jackson?

REP. JACKSON: Thank you, Mr. Chairman. Senator Clark took one of my points that I was going to make, but part of my uneasiness with this is that it refers to the current Congressional plan. I think you could make reference just saying that you want to do it to a partisan advantage and maximize Republican members, and I could agree with that, I guess, but you have that opportunity.

I would point out that your maps originally had a 9/4 split, and that any reference to 10/3 is not what your maps were; your maps were a 9/4 split. What you've done is taken out the [65] 2012 election, but that's not my question.

My question is, are we going to rank these criteria in any order, because you've used words in this criteria like "reasonable efforts." Well, if -- are the -- how will the mapmakers know what a reasonable effort is? In trying to come up with 10 Republican districts, will they be able to make a reasonable effort that means that now they can consider the 2008, 2012 elections? Will they be able to split precincts as part of making a reasonable effort to make a 10/3 split?

REP. LEWIS: Representative Jackson, that you for that series of questions. The answer to your question, the first part was -- I'm sorry Mr. Chairman, I'm sorry.

SEN. RUCHO: Go ahead, please.

REP. JACKSON: Will there be any type of ranking of these criteria anywhere?

REP. LEWIS: No. No is the answer. That's why these criteria are being presented individually and discussed and debated individually. Map-- drawing maps is largely a balancing act. We are trying to specify certain [66] things that you cannot use. You asked about race. You cannot use that, and I apologize; I don't remember what else you asked about, Representative Jackson.

REP. JACKSON: Follow-up, Mr. Chairman?

SEN. RUCHO: Follow-up.

REP. JACKSON: Okay. So it would be your contention, then, that making reasonable efforts would not include violating any of the other criteria that we have passed?

REP. LEWIS: Absolutely. Mr. Chairman?

SEN. RUCHO: Yes?

REP. LEWIS: If there aren't further quest ions, I move adoption of the 2016 contingent Congressional plan proposed criteria labeled "Partisan Advantage."

SEN. RUCHO: All right.

REP. JONES: Second.

SEN. RUCHO: Representative Jones has seconded. All right, members of the committee, there has been considerable discussion, and if there's any additional thoughts, this is your opportunity.

(No response.)

SEN. RUCHO: Seeing none, Mr. Clerk, [67] please go through the roll.

CLERK: Lewis?

REP. LEWIS: Aye.

CLERK: Jones?

REP. JONES: Aye.

CLERK: Brawley?

REP. BRAWLEY: Aye.

CLERK: Cotham?

REP. COTHAM: No.

CLERK: Davis?

REP. DAVIS: Aye.

CLERK: Farmer-Butterfield?

REP. FARMER-BUTTERFIELD: No.
CLERK: Hager?
REP. HAGER: Aye.
CLERK: Hanes?
REP. HANES: No.
CLERK: Hardister?
REP. HARDISTER: Aye.
CLERK: Hurley?
REP. HURLEY: Aye.
CLERK: Jackson?
REP. JACKSON: No.
CLERK: Johnson?
REP. JOHNSON: Aye.
[68] CLERK: Jordan?
REP. JORDAN: Aye.
CLERK: McGrady?
REP. MCGRADY: Aye.
CLERK: Michaux?
REP. MICHAUX: No.
CLERK: Moore?
REP. MOORE: No.
CLERK: Stam?
REP. STAM: Aye.
CLERK: Stevens?
REP. STEVENS: Aye.
CLERK: Rucho?
SEN. RUCHO: Aye.

CLERK: Apodaca?
SEN. APODACA: Aye.
CLERK: Barefoot?
SEN. BAREFOOT: Aye.
CLERK: Blue?
SEN. BLUE: No.
CLERK: Brown?
SEN. BROWN: Aye.
CLERK: Clark?
SEN. CLARK: No.
CLERK: Harrington?
[69] SEN. HARRINGTON: Aye.
CLERK: Hise?
SEN. HISE: Aye.
CLERK: Jackson?
SEN. JACKSON: Aye.
CLERK: Lee?
SEN. LEE: Aye.
CLERK: McKissick?
SEN. MCKISSICK: No.
CLERK: Randleman?
SEN. RANDLEMAN: Aye.
CLERK: Sanderson?
SEN. SANDERSON: Aye.
CLERK: Smith?
SEN. SMITH: No.
CLERK: Smith-Ingram?

SEN. SMITH-INGRAM: No.

CLERK: Wells?

SEN. WELLS: Aye.

CLERK: 23-11.

SEN. RUCHO: All right, members of the committee, roll call on the "Partisan Advantage" criteria was ayes, 23, nos, 11.

...

Excerpts from Joint Redistricting Committee, North Carolina General Assembly Extra Session on Redistricting (Feb. 18, 2016)

...

[40] ...

SEN. RUCHO: Thank you. Before we go onto the [41] next question, what I would like to do is, Ms. McCraw, would you explain your analysis, the staff analysis on the number of split counties and split VTDs so that members would understand what this map, 2016 Contingent Congressional Map, is as compared to previous maps?

MS. MCCRAW: Yes, Senator Rucho. Kara McCraw, Legislative Analysis Division. You do have a table in front of you that says "Comparison of Split Counties and Split VTDs in Congressional Plans." This compiles into a table starting with the '92 Congressional Plan, the three in the '90s, the 2001 Congressional as well as the current plan and the proposed plan. Using the data that is available on the NCGA redistricting archives, if you go to each of those plans, there are reports that are on the General Assembly website that show the counties that are split between districts. And then beginning in the 2000 decade precincts or VTDs that are split, that information is not available for the '90s. So you can see in that the '92 Congressional Plan had 44 counties split; the '97 had 22; the '98, 21; then in 2001, the Congressional Plan had 28; the 2011 had 40; and the proposed plan has 13.

VTD split, we only have the data back through the last decade. In 2001 that was run as precinct splits

and that was 22 at that time; 2011 had [42] 68; and the current plan has 12.

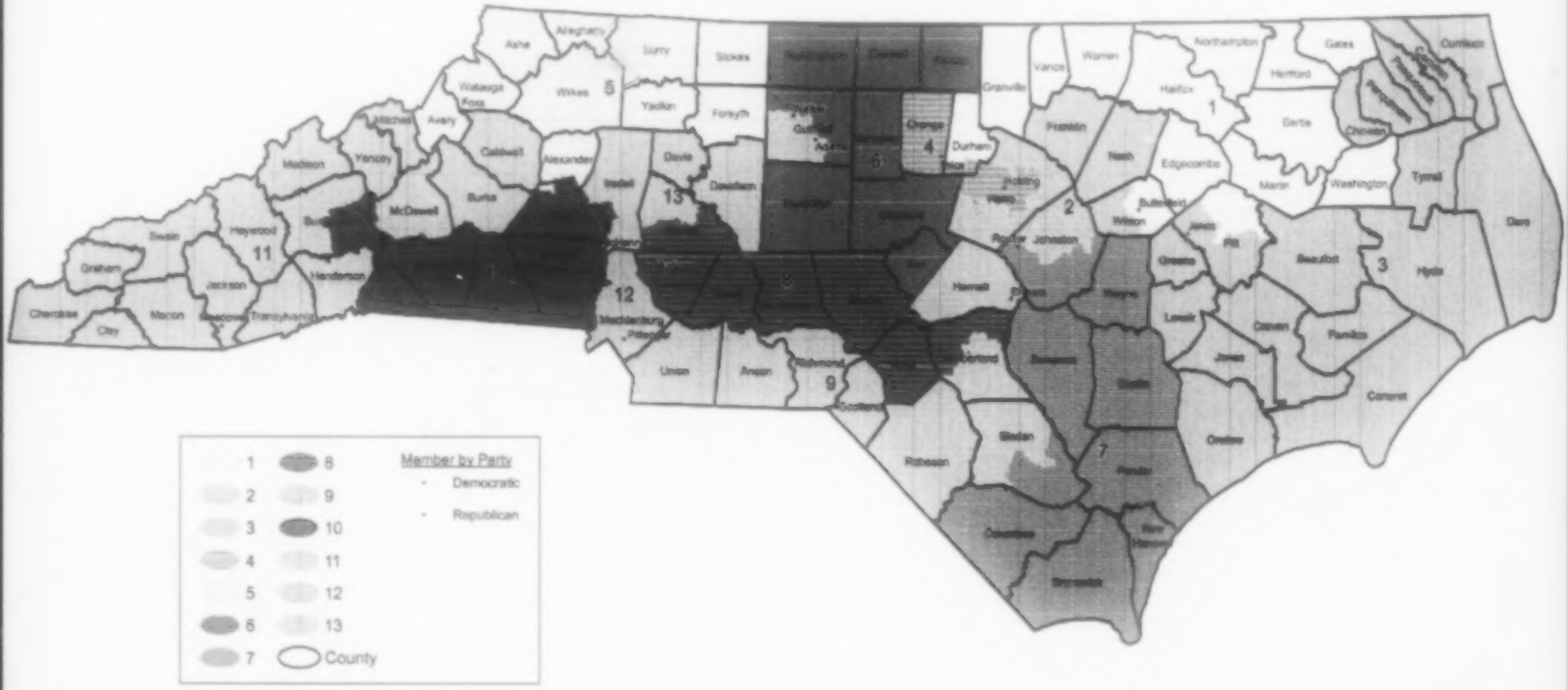
SEN. RUCHO: Any questions on that particular information, members? You can see that this map is—has 87 whole counties, and it has only 12 VTD splits.

...

2016 Enacted Map (Common Cause Exh. 1001)

(See Insert Next Page)

2016 Contingent Congressional Plan - Corrected



2016 Regular Session

Printed by the NC General Assembly, February 18, 2016.

EXHIBIT

1001

1:16-CV-1026

2016 Contingent Congressional Plan Committee Adopted Criteria (Common Cause Exh. 1007)

Equal Population

The Committee will use the 2010 federal decennial census data as the sole basis of population for the establishment of districts in the 2016 Contingent Congressional Plan. The number of persons in each congressional district shall be as nearly as equal as practicable, as determined under the most recent federal decennial census.

Contiguity

Congressional districts shall be comprised of contiguous territory. Contiguity by water is sufficient.

Political data

The only data other than population data to be used to construct congressional districts shall be election results in statewide contests since January 1, 2008, not including the last two presidential contests. Data identifying the race of individuals or voters shall not be used in the construction or consideration of districts in the 2016 Contingent Congressional Plan. Voting districts ("VTDs") should be split only when necessary to comply with the zero deviation population requirements set forth above in order to ensure the integrity of political data.

Partisan Advantage

The partisan makeup of the congressional delegation under the enacted plan is 10 Republicans and 3 Democrats. The Committee shall make reasonable efforts to construct districts in the 2016 Contingent Congressional Plan to maintain the current partisan makeup of North Carolina's congressional delegation.

Twelfth District

The current General Assembly inherited the configuration of the Twelfth District from past General Assemblies. This configuration was retained because the district had already been heavily litigated over the past two decades and ultimately approved by the courts. The Harris court has criticized the shape of the Twelfth District citing its "serpentine" nature. In light of this, the Committee shall construct districts in the 2016 Contingent Congressional Plan that eliminate the current configuration of the Twelfth District.

Compactness

In light of the Harris court's criticism of the compactness of the First and Twelfth Districts, the Committee shall make reasonable efforts to construct districts in the 2016 Contingent Congressional Plan that improve the compactness of the current districts and keep more counties and VTDs whole as compared to the current enacted plan. Division of counties shall only be made for reasons of equalizing population, consideration of incumbency and political impact. Reasonable efforts shall be made not to divide a county into more than two districts.

Incumbency

Candidates for Congress are not required by law to reside in a district they seek to represent. However, reasonable efforts shall be made to ensure that incumbent members of Congress are not paired with another incumbent in one of the new districts constructed in the 2016 Contingent Congressional Plan.

Excerpts from Senate Redistricting Committee, North Carolina General Asse.nbly Extra Session on Redistricting (Feb. 18, 2016)

...

[23] provided assistance in drawing these districts, either individually or collectively, that you looked to for assistance in preparing this map?

SEN. ROCHO: I don't think that's relevant to the -- Senator McKissick.

SEN. MCKISSICK: Yes.

SEN. ROCHO: We're talking about the maps and how they're drawn and all of the stat packs. I don't think that question is relevant to the decision as to whether you will vote for or against the map. Thank you, that is the decision of the Chair.

SEN. MCKISSICK: A follow-up question for the Chair. I see. I just think it is highly relevant to know who the consultants were and where they were located so they could be identified as a part of the record. Particularly since it has been indicated that race was not one of the criteria that was used in developing the maps here at the General Assembly. I don't know if perhaps consultants that might have been used might have used databases outside of the General Assembly where, say, race and other considerations might have been used in helping to draft the map that is before us.

SEN. ROCHO: Senator McKissick.

SEN. MCKISSICK: Yes.

[24] SEN. RUCHO: I'll be clear, the criteria that Representative Lewis has submitted is the criteria that was used to draw the maps, and probably that's

as much as we need to know. Okay. Thank you, have you got an additional question?

SEN. MCKISSICK: Yes.

SEN. RUCHO: Go ahead.

SEN. MCKISSICK: Now, in terms of the partisan advantage that was identified as a criteria, of course that was identified, and it was passed by the committee. I was wondering why there was a 10-3 split when if you look at the registrations of Democrats, Republicans, and unaffiliated voters in North Carolina it would suggest, perhaps, that division ought to be different. And if we look at the fact that back in 2012, for example, of the candidates running for Congress, the Democratic candidates received more total votes than Republicans but ended up with only three seats. I mean, what is -- how was the determination made that we should have a 10-3 split in devising this map? When perhaps, based upon voter registration and voting trends, even using patterns from races which have been identified here, it was suggested that perhaps a greater number of seats in districts should have been carved out for Democrats.

[25] SEN. RUCHO: Representative Lewis.

REP. LEWIS: Thank you, Mr. Chairman. Thank you for the question. Senator, to try and fully respond to your question, the first part of your question is we believe that voting patterns are better indicators than voter registration. So we did not actually use voter registration in drawing these maps.

The second part of your question, why did we attempt to achieve a 10-3 congressional map draw is

that was the criteria that was openly debated and adopted by the 2016 Joint Select Interim Committee.

SEN. MCKISSICK: Last follow-up, Mr. Chair.

SEN. RUCHO: Follow-up.

SEN. MCKISSICK: And that's simply this, obviously there's Supreme Court decisions that use the term "communities of interest" as a valid criteria in drafting these types of congressional district maps. Was there a specific reason why it was not one of the identifying criteria that was adopted -- at least proposed and adopted by the committee? Since it is a valid criteria underneath cases decided by the United States Supreme Court, why would we want to disregard that as a criteria for us trying to draw maps since there is certainly advantages in grouping people into districts based upon common collective interests,

...

Excerpts from Senate Floor Session, North Carolina General Assembly Extra Session on Redistricting (Feb. 18, 2016)

...

[36] LT. GOV. FOREST: Senator Rucho, do you yield for another question. Senator Rucho, do you yield?

SEN. RUCHO: Yes, I do.

LT. GOV. FOREST: Okay. Senator.

SEN. BRYANT: So when and where were the maps initially drawn, and were public funds involved in that process?

SEN. RUCHO: My understanding of it is that when we consulted with Dr. Hofeller, and of course, consulted with our attorneys to make sure that we have the best answer to be able to comply with the Court, since not like you, an accomplished lawyer, I'm just merely a dentist, and the -- you know, we -- we did talk with the experts, and we were able to find a plan to do it.

And in doing so, that's how we actually got the criteria established, which is why and how Dr. Hofeller was able to draw maps that are what we have before us.

SEN. BRYANT: One more follow-up.

LT. GOV. FOREST: Senator Rucho, do you yield?

SEN. RUCHO: Yes, I so.

SEN. BRYANT: So at -- at what point, or

...

[41] SEN. RUCHO: Yes.

SEN. MCKISSICK: Do you know if before the adoption of the criteria, if your consultant had already begun making maps without knowing that those criteria would be adopted?

SEN. RUCHO: Well, to say that I think it's simple to say that, you know, there is always criteria when you establish that. You know, I mean, it's like a let me just say to you, it's like any bill in the Legislature. When you submitted a bill, you already have it planned out where you have privilege, you know, privacy and the like, and you're thinking about what you want to put to the bill.

What we thought -- we think about what we would like to see in there, the same manner as you do. And in doing so, you know, you go ahead and you say, you know, "We want it to be drawn with whole counties," which we actually got only -- 87 whole counties, which was the best it's ever been. And we didn't want to cut any -- divide any VTDs, or as few as possible, so that we can at least do it on -- based on trying to maintain the zero deviation. And you know, the basic criteria that would be there and that you would discuss.

[42] And I'm sure -- and matter of fact, it may be a great time for me to ask you some questions about who your map drawers were and who funded it and the like, too. So -- but in essence, we did we had a discussion with him, and make sure that he fully understand what his limitations were. And in doing so, you know as well as I do, listing those criteria, that's what he was told to do and that's what I 'm sure he did.

SEN. MCKISSICK: So -- follow-up, Mr. President?

SEN. RUCHO: Senator Rucho, do you yield?

SEN. RUCHO: Yes, sir.

SEN. MCKISSICK: Very brief follow-up, Senator Rucho. So it's possible that before those criteria were adopted, if he had the traditional categories that were available under the 2011 stat pack that might have included race or party affiliations and a number of other parameters that they -- it's a possibility that he began drawing early maps, taking into consideration those factors before the criteria were adopted, isn't it?

SEN. APODACA: Mr. President, Senator Apodaca, what purpose do you rise?

SEN. APODACA: Inquiry of the Chair, [43] please.

LT. GOV. FOREST: Senator Apodaca.

SEN. APODACA: Mr. President, are we talking about this map, or are we talking about how we draw maps, or what imaginary maps may have been done, or who may have done what, when, or where, or are we voting on this map today as presented?

LT. GOV. FOREST: Thank you, Senator. I -- I would recommend that we keep our focus on the map that we're talking about today, specifically on that bill. The question, we can follow-up -- go ahead and finish the question. Senator Rucho, if you'd like to answer it, feel free.

SEN. RUCHO: I'm not sure how to say it any clearer. The answer was simple. We -- you know, the -- the -- the criteria that was there was what was given to the -- to the map drawer. They were told that "This is all you live with and this is all you work with in drawing this map." What part of that am I not

understanding? Or maybe you're not understanding it. The criteria was established, and that is the criteria that was followed.

SEN. MCKISSICK: Okay. I -- I understand

...

[80] SEN. RUCHO: Yes.

SEN. CLARK: Let me narrow my question a little bit more. Was the criteria -- criteria to maintain political advantage provided to the mapmakers prior to the public hearing?

SEN. RUCHO: Repeat that again. I couldn't hear you.

SEN. CLARK: Was the criteria to maintain political advantage for the Republican Party provided to the mapmakers prior to the public hearing?

SEN. RUCHO: Well, we looked at the -- at the previous map, which was done following the Voting Rights Act and all the other things that needed to be addressed the way the Supreme Court had told us to do. And that is how we did the other map. This one was found unconstitutional.

What we were doing is saying, okay, political gerrymandering is not illegal, despite what Senator Stein says, and -- and CD-12 is a political gerrymandering that was approved by the Supreme Court. So there is nothing wrong with political gerrymandering. I -- I won't accept that as being a criticism.

SEN. CLARK: I didn't say anything was [81] wrong with it. I'm just asking you to tell me --

SEN. RUCHO: Just letting you know.

SEN. CLARK: -- whether or not one of the criteria provided to the mapmakers was to maintain political advantage, and was that done prior to the public hearing?

SEN. RUCHO: To answer your question --

LT. GOV. FOREST: You go ahead, Senator.

SEN. RUCHO: To answer your question, we wanted to achieve the same goal s that were available or that were achieved on the previous map on this new map so that -- and -- and to clearly achieve -- we had 13 -- excuse me, 10/3, and we said 10/3 would be the appropriate way to go in this one, too.

SEN. CLARK: I guess --

LT. GOV. FOREST: Senator --

SEN. CLARK: -- I should take that for a yes.

LT. GOV. CLARK: Senator, do you want to speak to the bill or do you want to ask another question?

SEN. CLARK: Will the Senator yield for another question?

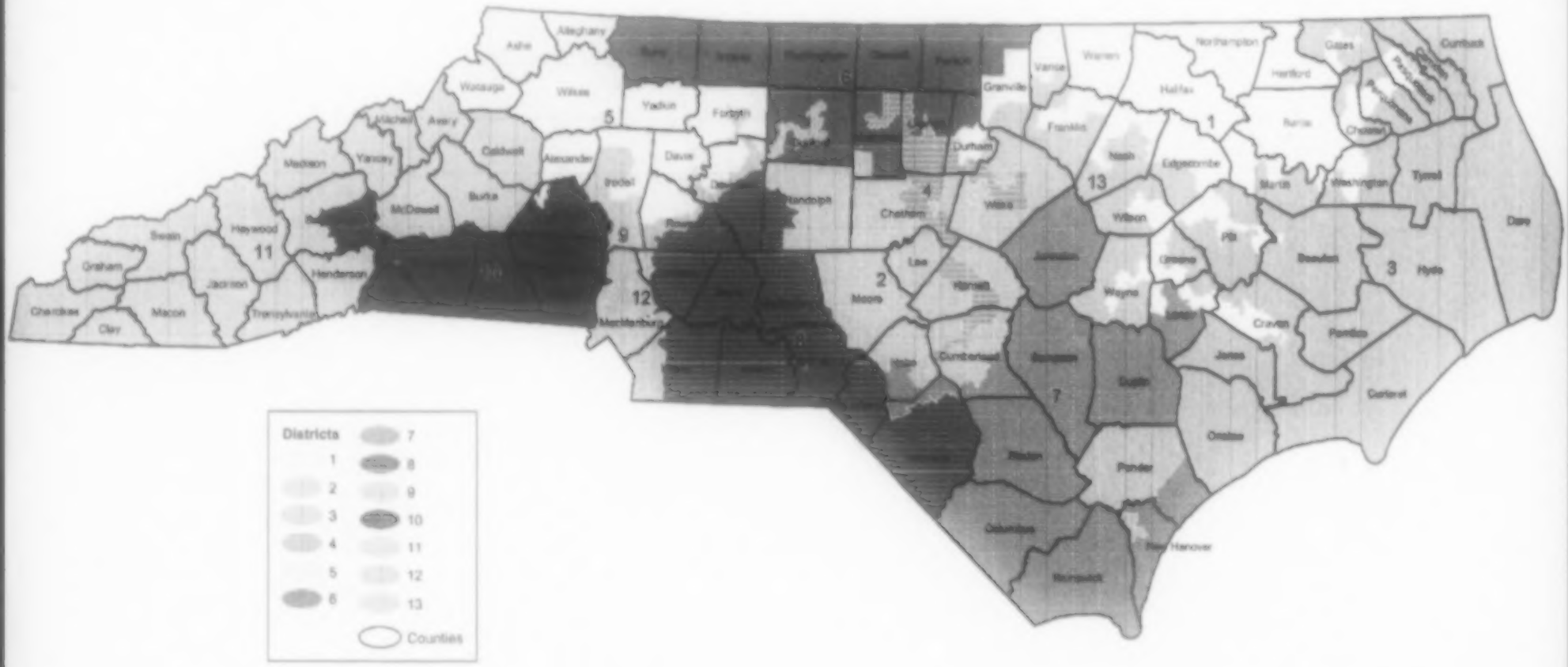
LT. GOV. FOREST: Senator Rucho, do you

...

Rucho-Lewis Congress 3 (2011 Enacted Map)
(Joint Plaintiffs' Exh. 2001)

(See Insert Next Page)

RUCHO-LEWIS CONGRESS 3



Printed by the NC General Assembly, July 28, 2011. File source: Cd07-4.gdb

PLAINTIFF'S EXHIBIT
2001
1:16-CV-1026

Dr. Hofeller's Formula
(Joint Plaintiffs' Exh. 2002)

FORMULA

(100*(G08G_RV+ G08S_RV+ G08K_RV+ G12G_RV+ G120_RV+ G10S_RV+ G14S_RV))/(G08G_RV+ G08G_DV+ G08S_DV+ G08S_RV+ G08K_DV+ G08K_RV+ G12G_DV+ G12G_RV+ G120_DV+ G120_RV+ G10S_DV+ G10S_RV+ G14S_DV+ G14S_RV)

SEVEN FACTORS

1. 08 Governor
2. 08 U. S. Senate
3. 08 Commissioner of Insurance
4. 12 Governor
5. 12 Commissioner of Labor
6. 10 U.S. Senate
7. 14 U.S. Senate

Excerpt from Expert Report of
Jonathan Mattingly
(Common Cause Plaintiffs' Exh. 3002)

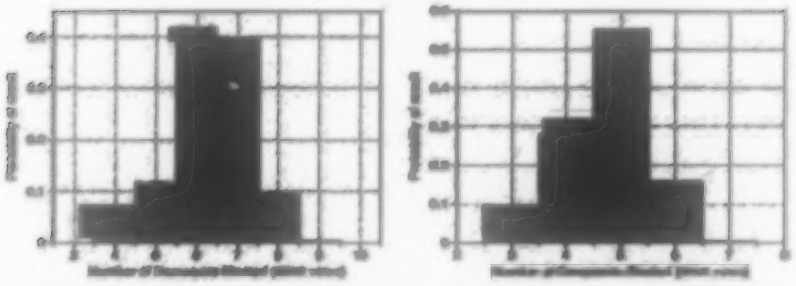
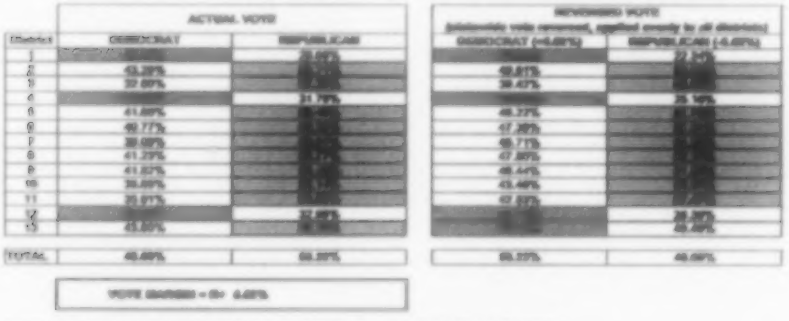
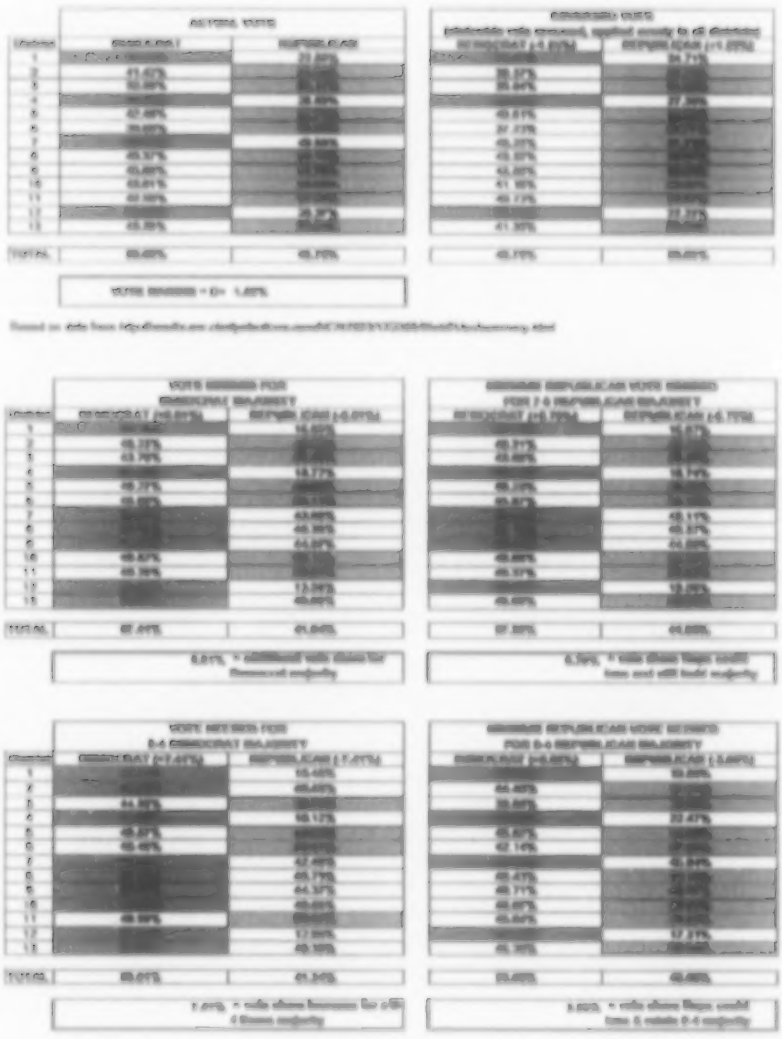


Figure 1: Probability of a given number of Democratic wins among the 13 congressional seats using 2012 election (left) and 2016 election (right) votes.

2016 North Carolina Congressional Election - Total Vote Share (Common Cause Plaintiffs' Exh. 3022)



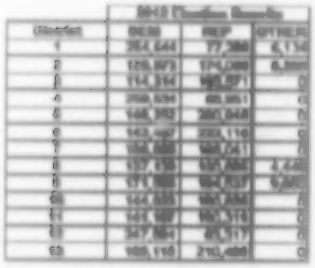


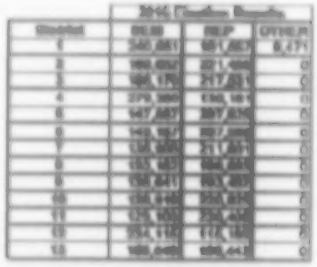
2012 and 2016 North Carolina Congressional Elections - Mean-Medium Analysis (Common Cause Plaintiffs' Exh. 3023)

District	2012 DEM VOTE SHARE	2016 DEM VOTE SHARE
1	[illegible]	[illegible]
2	41.42%	43.29%
3	36.89%	32.80%
4	[illegible]	[illegible]
5	42.46%	41.00%
6	39.06%	40.77%
7	60.10%	39.09%
8	46.37%	41.23%
9	46.66%	41.82%
10	43.01%	36.86%
11	42.59%	35.01%
12	[illegible]	[illegible]
13	43.20%	43.90%

MEAN	50.71%	46.24%
MEDIAN	43.20%	41.60%
GAP	7.59%	4.64%

= districts in which Democrat vote share exceeds mean

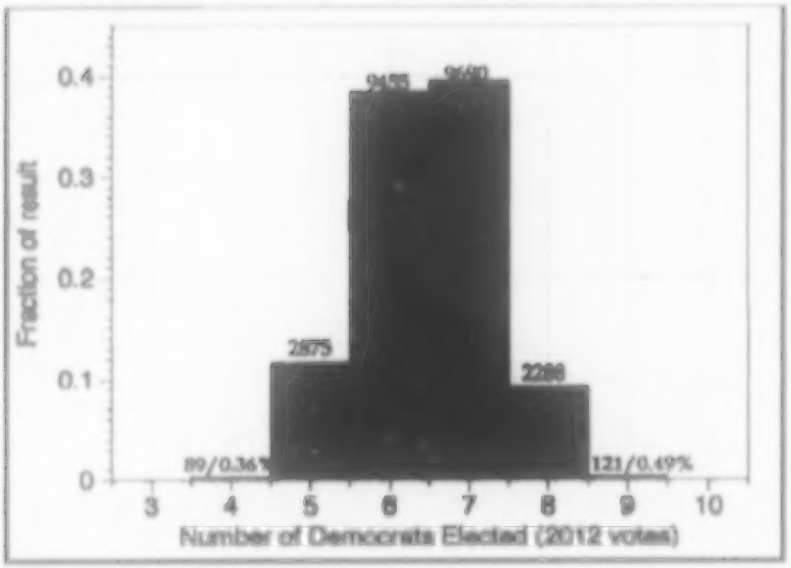




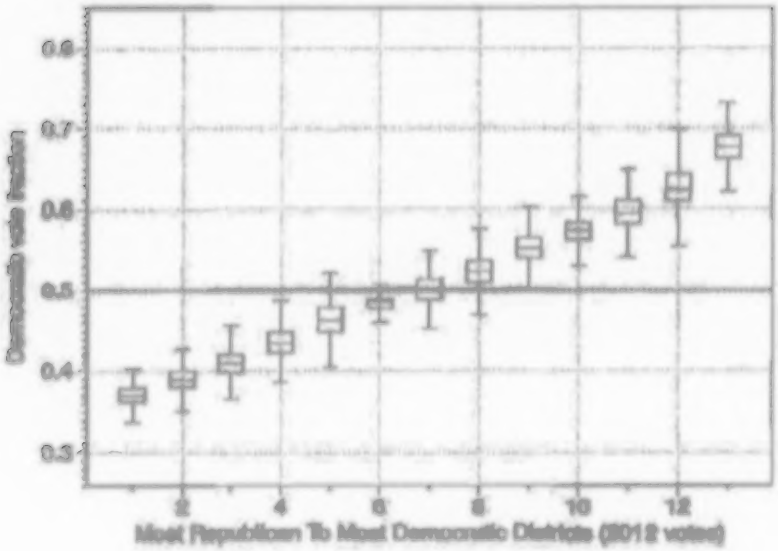
Excerpts from Jonathan Mattingly PowerPoint Demonstrative (Common Cause Plaintiffs' Exh. 3040)

Outcomes among 24,518 simulated maps

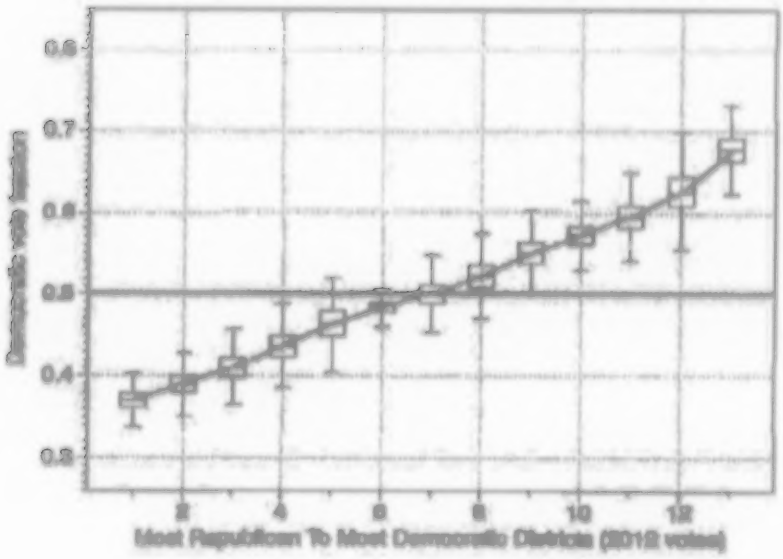
Votes for U.S. House 2012 (51%-49%/4-9 seats)



Analysis of 13 districts in simulated maps
Votes of U.S. House 2012 (51%-49%/4-9 seats)

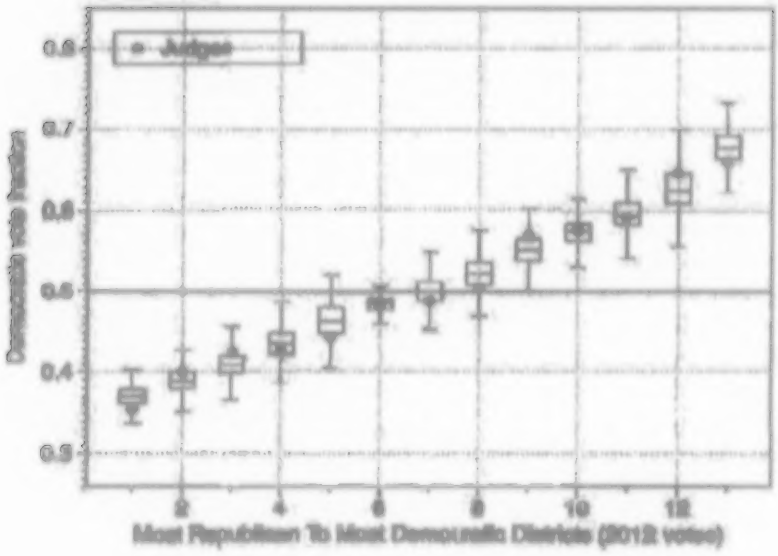


Analysis of 13 districts in simulated maps
Votes of U.S. House 2012 (51%-49%/4-9 seats)



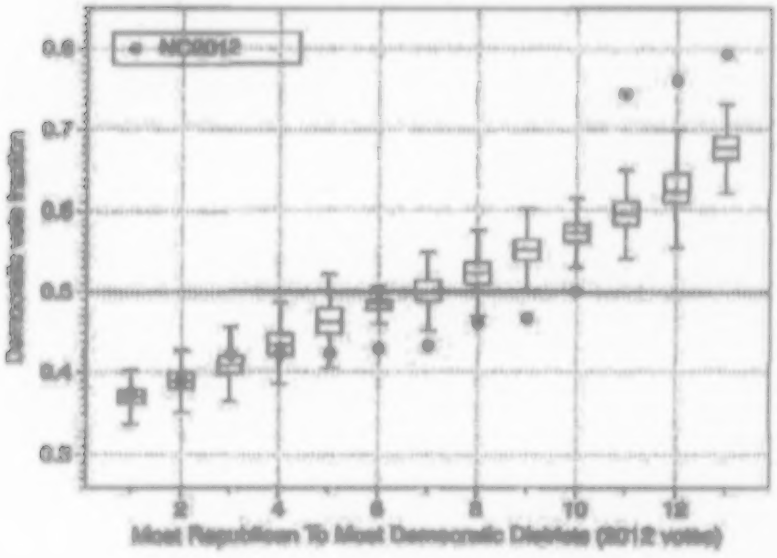
Analysis of 13 districts in Judges' plan

Votes for U.S. House 2012 (51%-49%/4-9 seats)



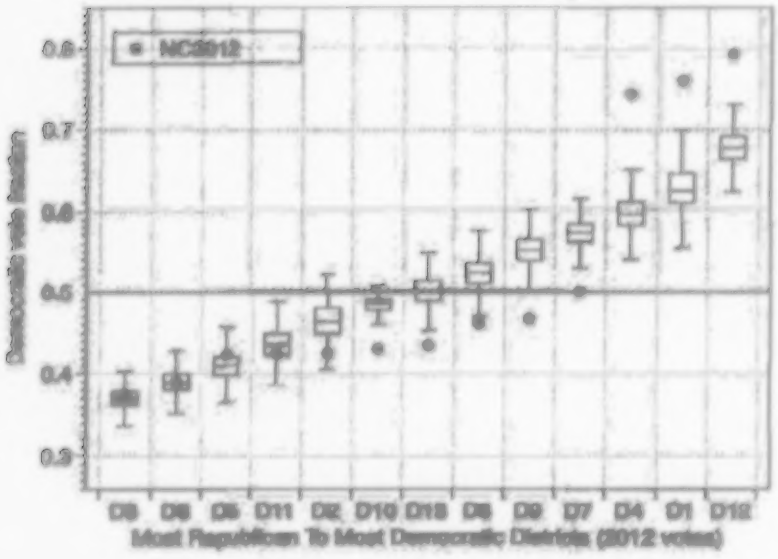
Analysis of 13 districts in NC2012 plan

Votes for U.S. House 2012 (51%-49%/4-9 seats)



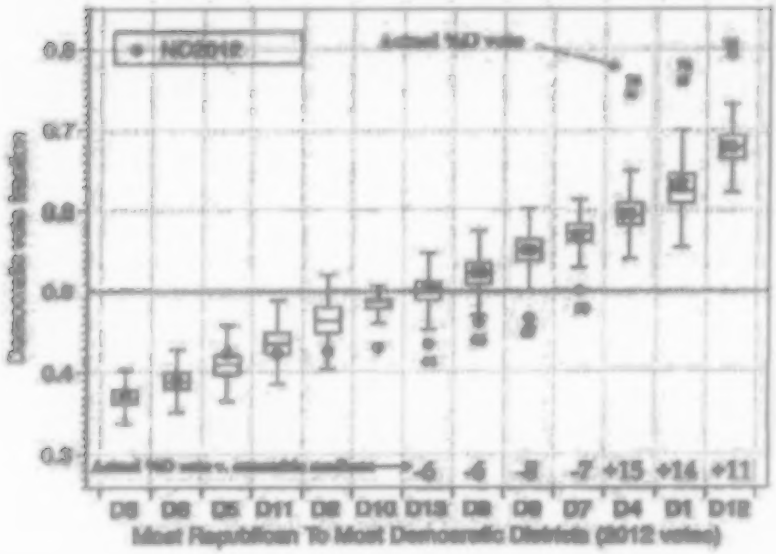
Analysis of 13 districts in NC2012 plan

Votes for U.S. House 2012 (51%-49%/4-9 seats)



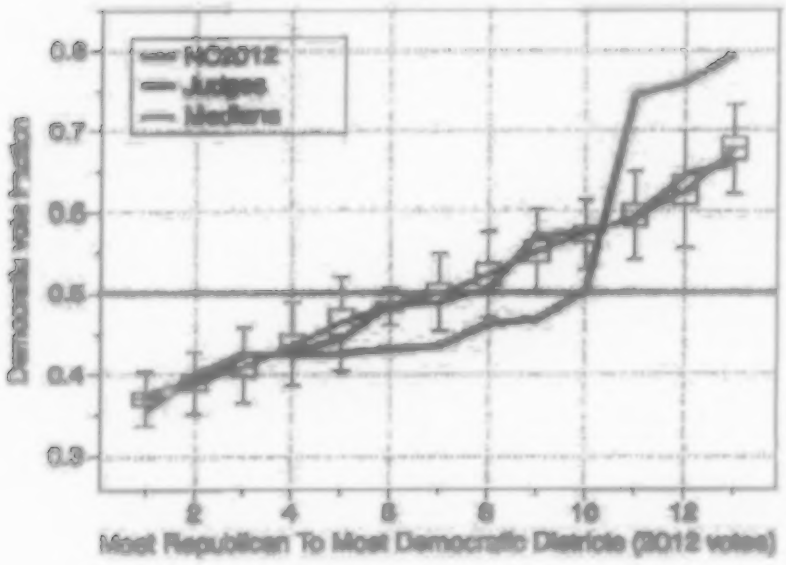
Analysis of 13 districts in NC2012 plan

Votes for U.S. House 2012 (51%-49%/4-9 seats)



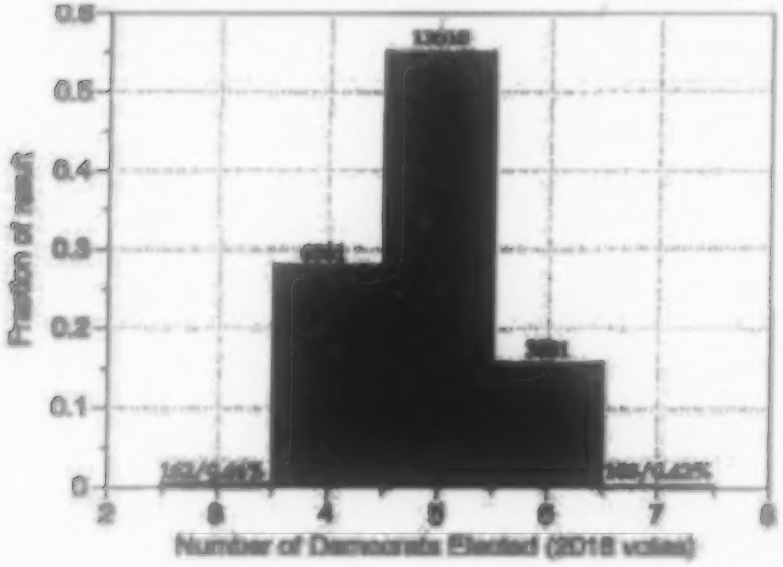
Comparison of results

Ensemble - Judges - NC2012



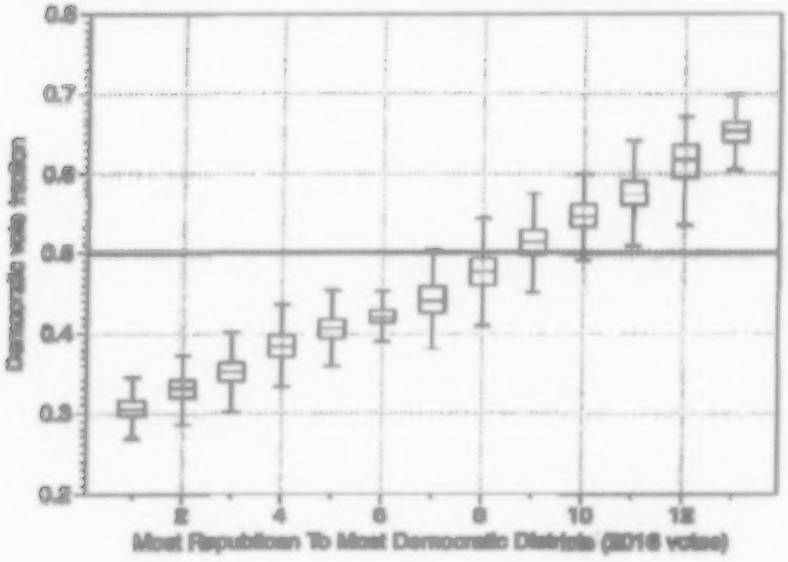
Outcomes among 24,518 simulated maps

Votes for U.S. House 2016 (53%-47%/10-3 seats)



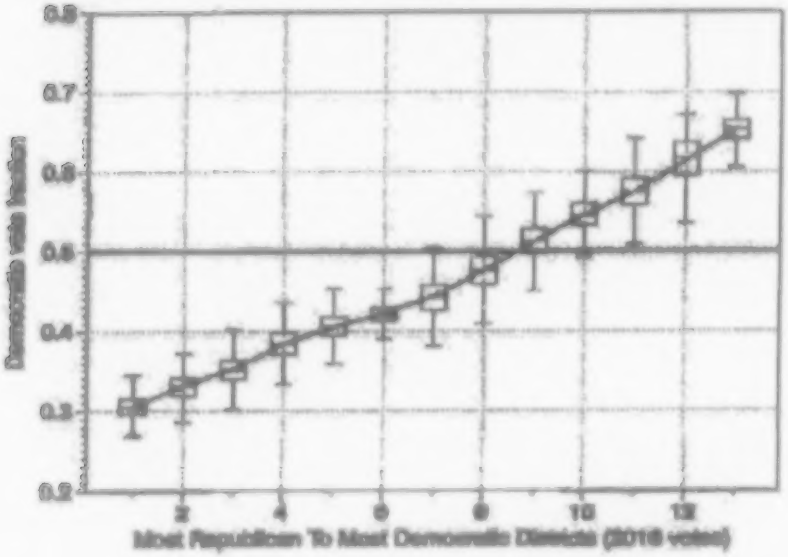
Analysis of 13 districts in simulated maps

Votes for U.S. House 2016 (53%-47%/10-3 seats)



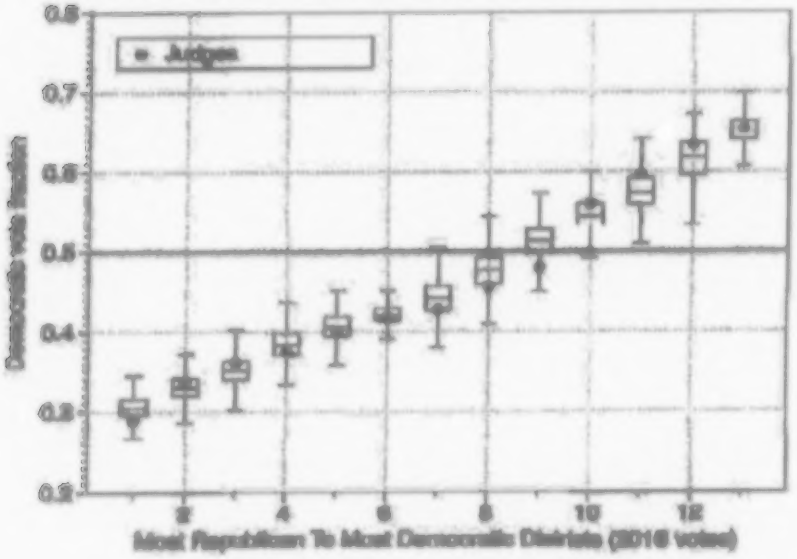
Analysis of 13 districts in simulated maps

Votes for U.S. House 2016 (53%-47%/10-3 seats)



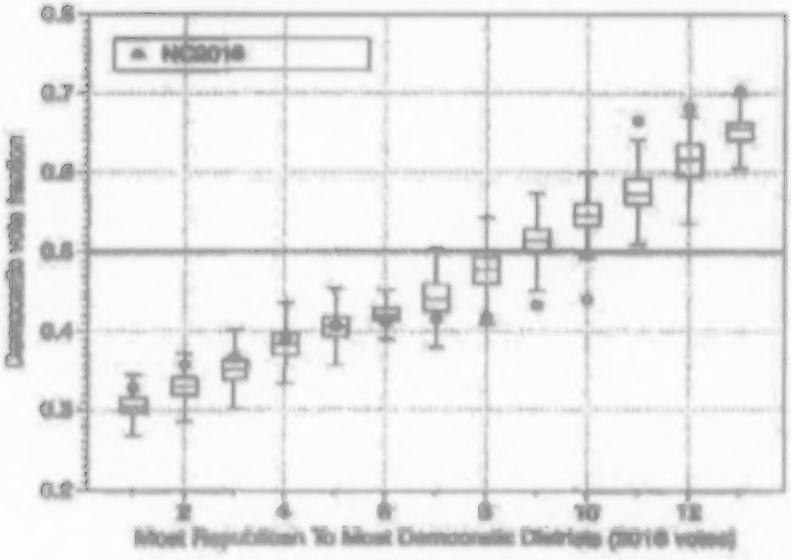
Analysis of 13 districts in Judges' Plan

Votes for U.S. House 2016 (53%-47%/10-3 seats)



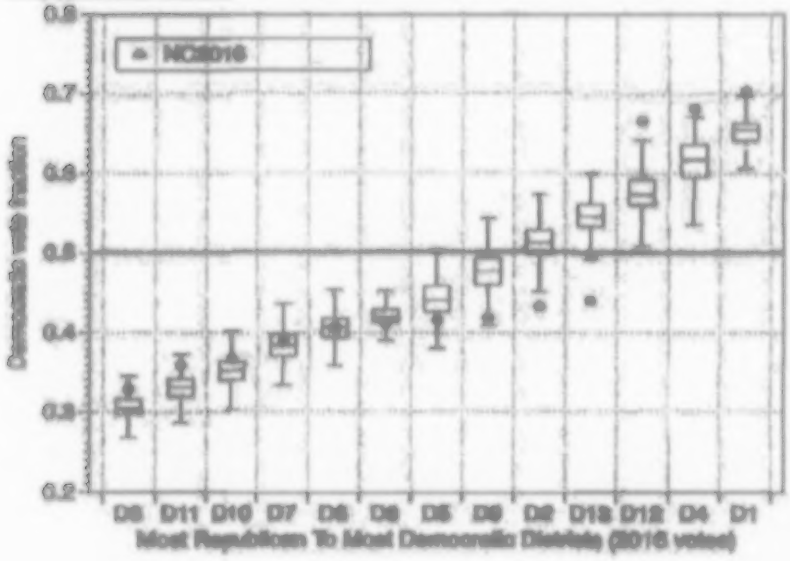
Analysis of 13 districts in NC2016 Plan

Votes for U.S. House 2016 (53%-47%/10-3 seats)



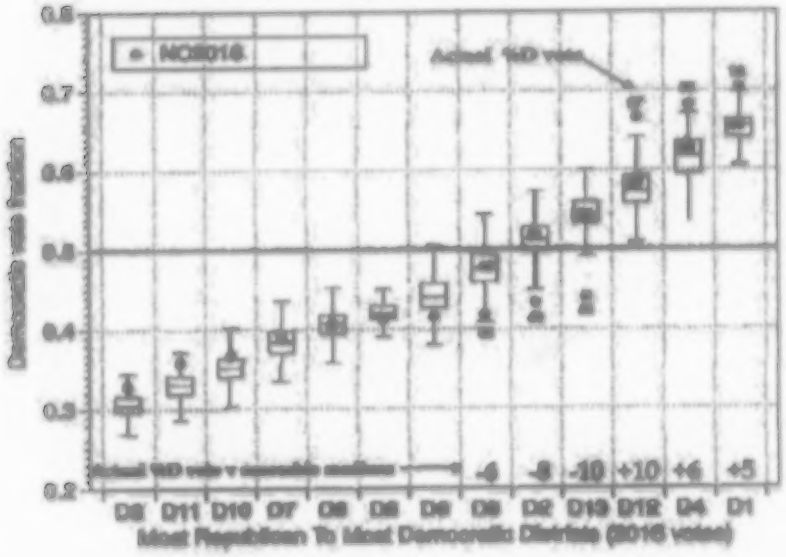
Analysis of 13 districts in NC2016 Plan

Votes for U.S. House 2016 (53%-47%/10-3 seats)



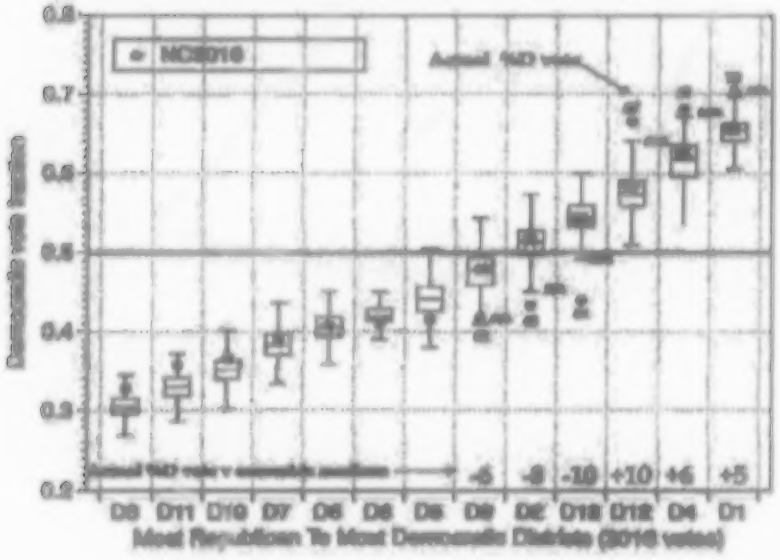
Analysis of 13 districts in NC2016 Plan

Votes for U.S. House 2016 (53%-47%/10-3 seats)



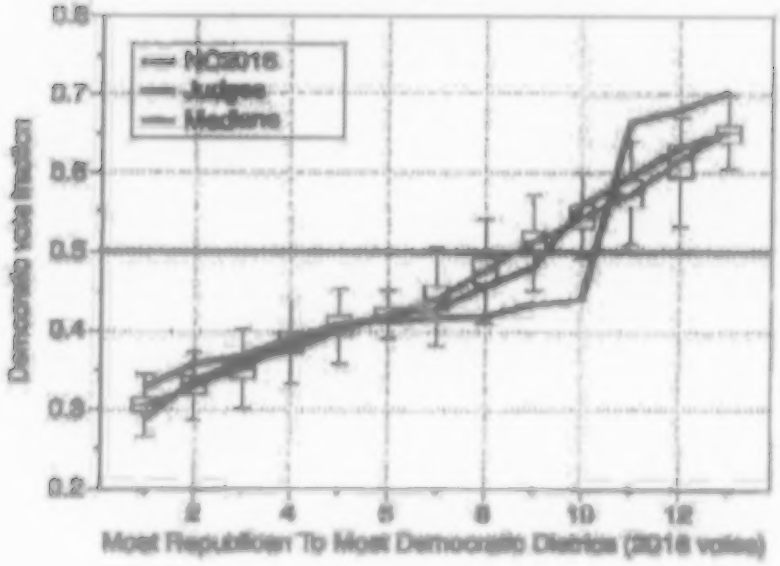
Analysis of 13 districts in NC2016 Plan

Votes for U.S. House 2016 (53%-47%/10-3 seats)



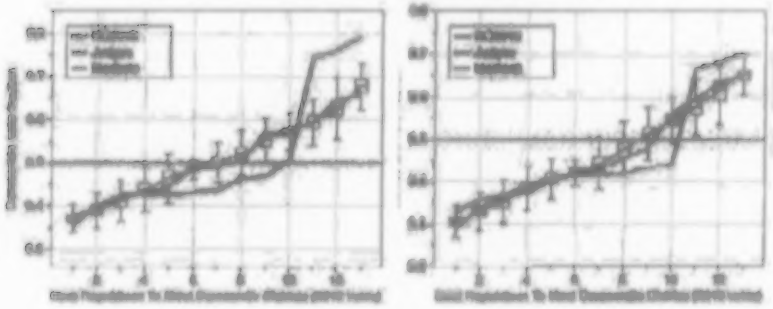
Comparison of results

Ensemble - Judges - NC2016



Comparison of results

Ensemble - Judges - NC2016



Demonstrative Presentation Used in Cross Examination of M.V. Hood III (Common Cause Plaintiffs' Exh. 3042)

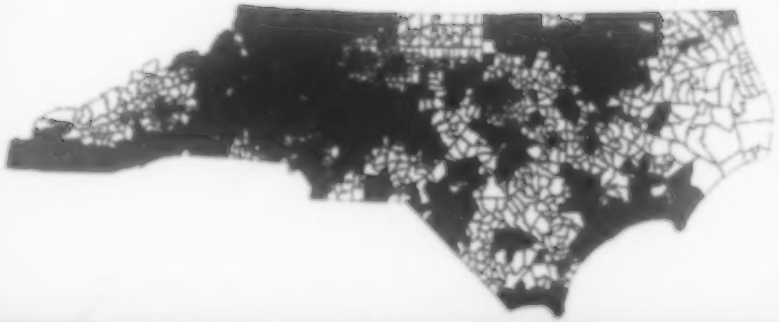
(See Insert Next Page)

* Dr. M. V. Hood Cross-Exam

PLAINTIFF'S
EXHIBIT
3042
1:16-cv-1026

Figure 3. North Carolina Partisan Cluster Analysis

Figure 3. North Carolina Partisan Cluster Analysis

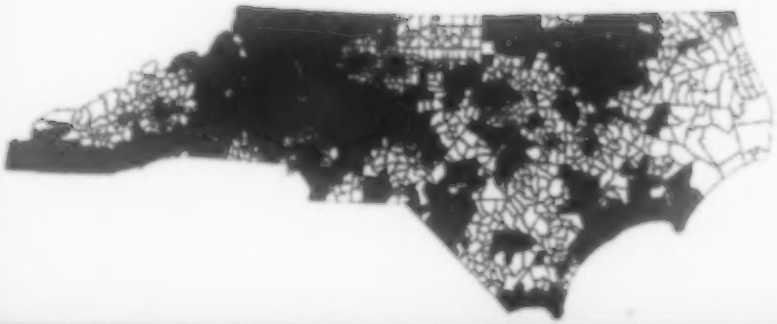


"Looking at the map (Figure 3), one can see that large sections of North Carolina are occupied by either Republican or Democratic clusters." p. 13

"North Carolina's political geography can affect the manner in which congressional districts are created." p. 13

"Democrats are more likely to be found in urban areas in Republicans in rural areas." p. 13

Figure 3. North Carolina Partisan Cluster Analysis



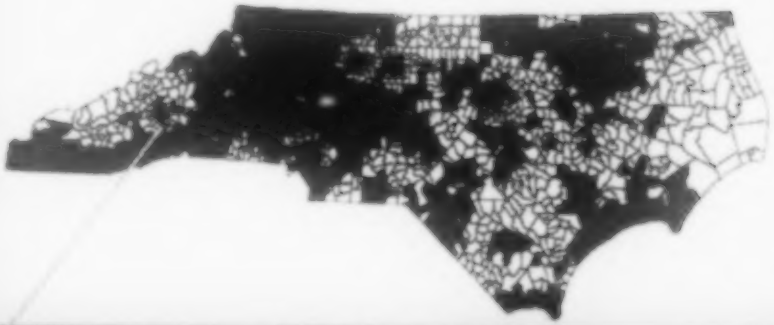
"Clustering of partisans can lead to *natural* packing of such groups in the redistricting process." p.10

"The presence of such spatial patterns can lead to the phenomenon where partisans are more likely to be placed together in the same district, sometimes referred to as *natural* packing." p. 13

"The state's political geography would also seem to naturally favor Republicans in the creation of Congressional districts." p. 26

Asheville Democratic Cluster

Figure 3 North Carolina Partisan Cluster Analysis



Asheville Democratic Cluster

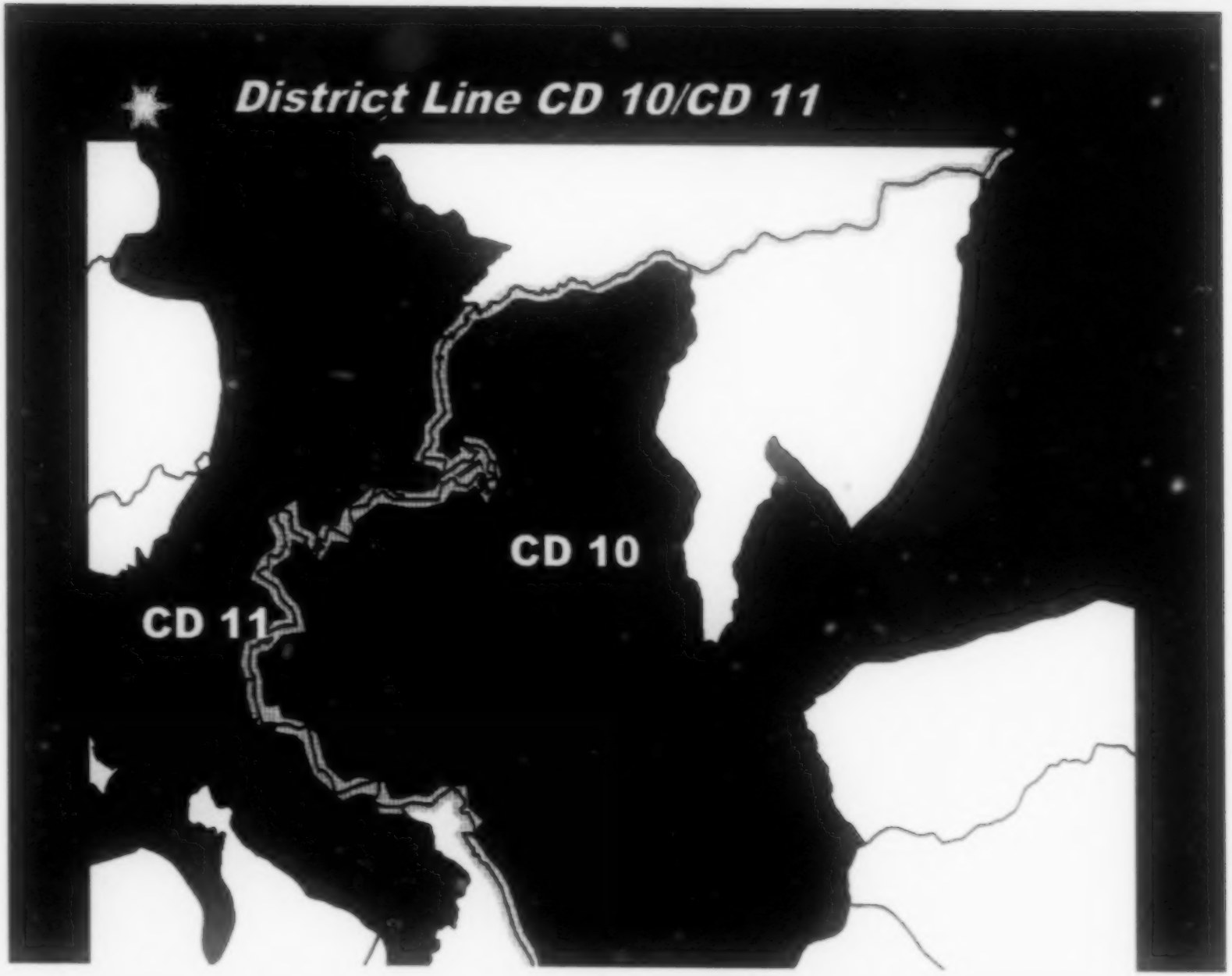
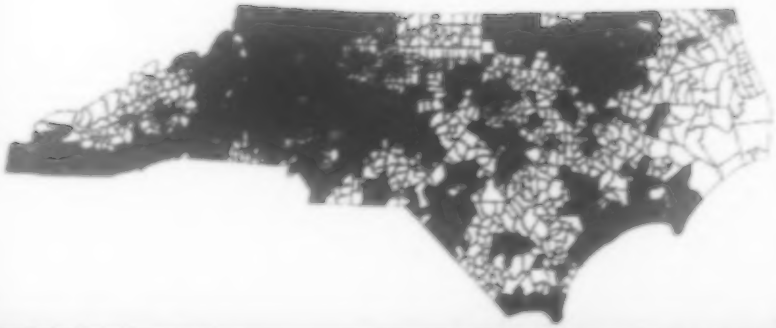

District Line CD 10/CD 11
CD 10
CD 11

Figure 3. North Carolina Partisan Cluster Analysis



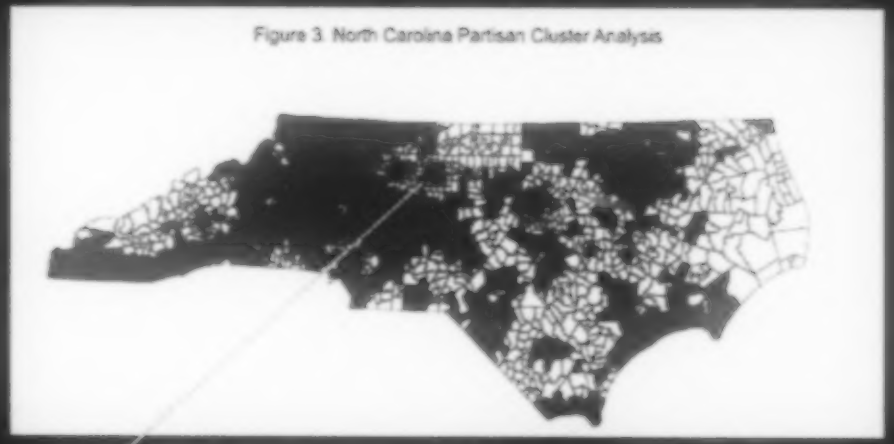
"Clustering of partisans can lead to *natural* packing of such groups in the redistricting process." p. 10

True/False:

What happened in Asheville was the legislative cracking of a Democratic partisan cluster in the redistricting process.

CD 10
CD 11
District 10:
District 11:

Greensboro Democratic Cluster



Greensboro Democratic Cluster

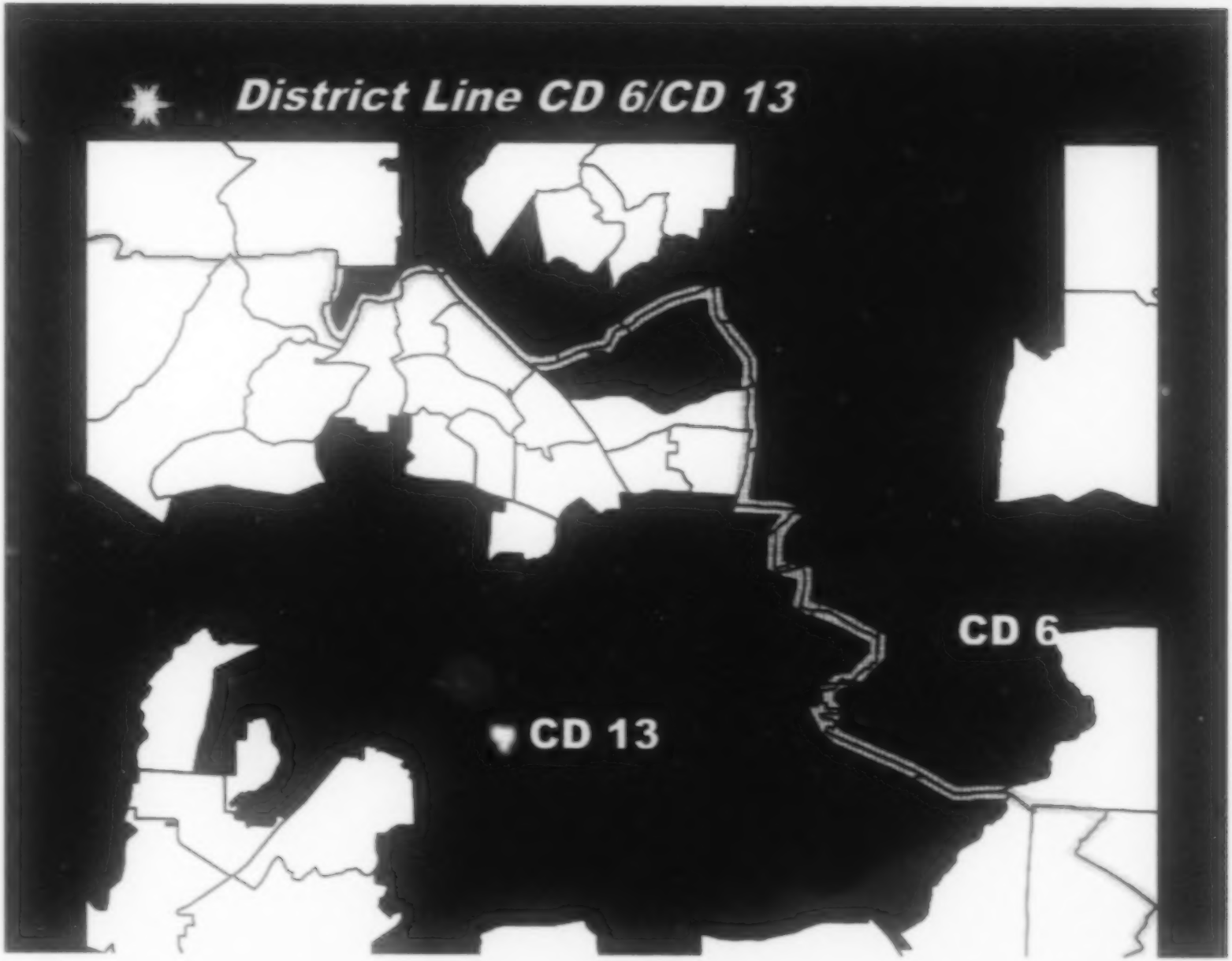
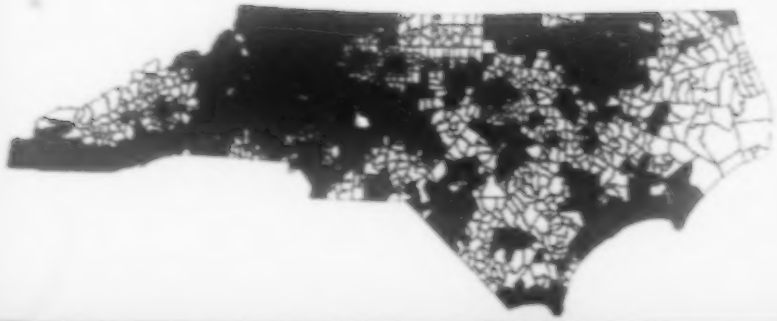

District Line CD 6/CD 13
CD 6
CD 13

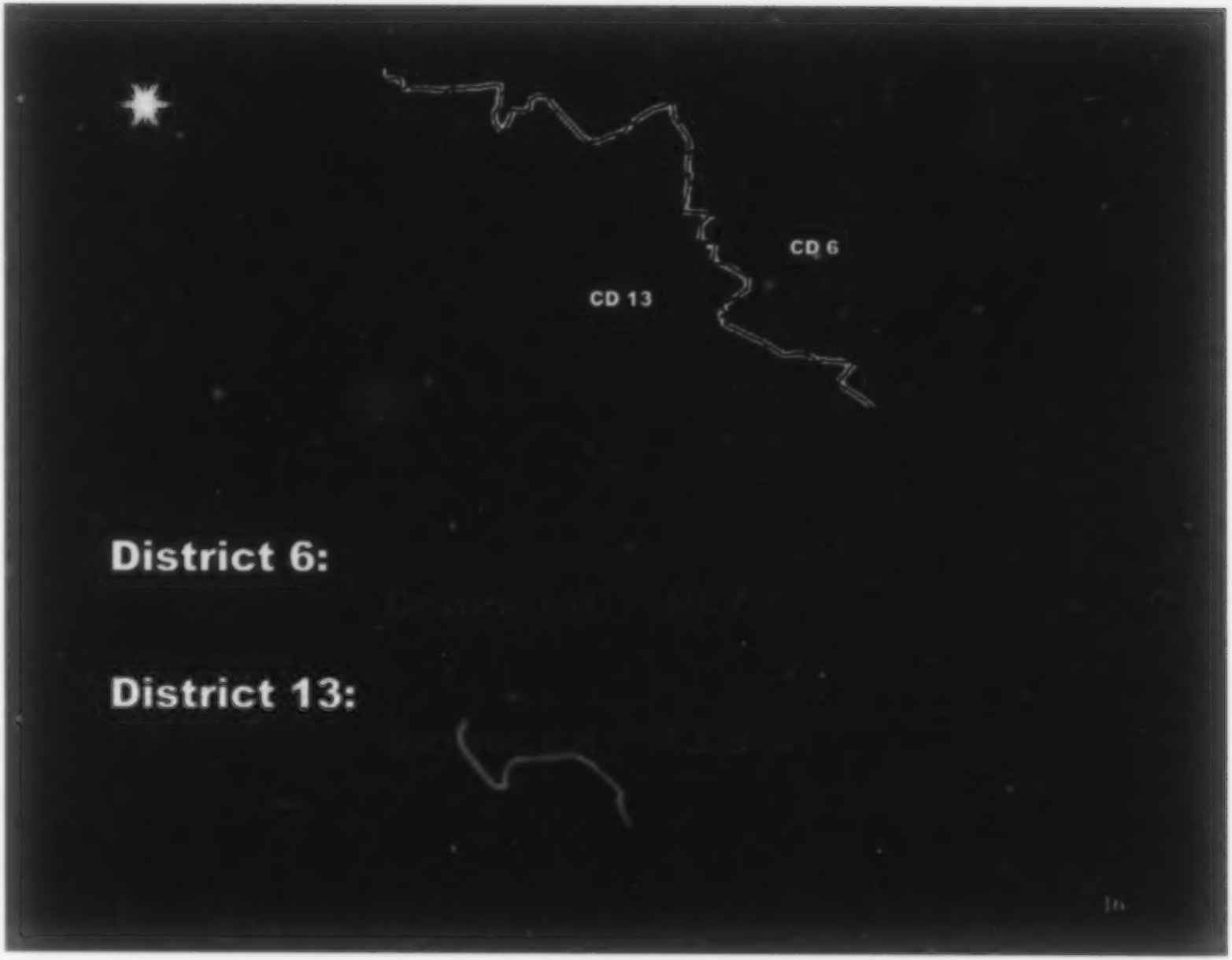
Figure 3. North Carolina Partisan Cluster Analysis



"Clustering of partisans can lead to *natural* packing of such groups in the redistricting process." p. 10

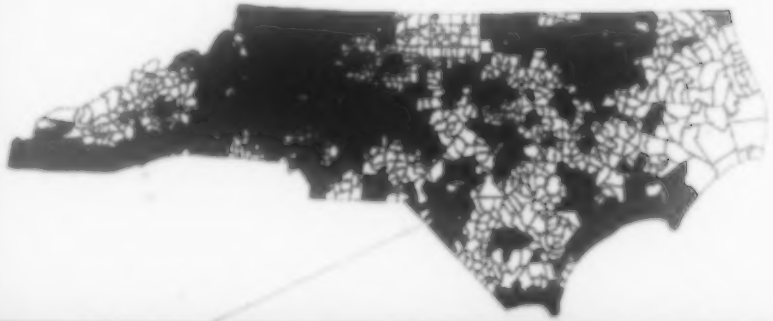
True/False:

What happened in Greensboro was the legislative cracking of a Democratic partisan cluster in the redistricting process.


CD 6
CD 13
District 6:
District 13:

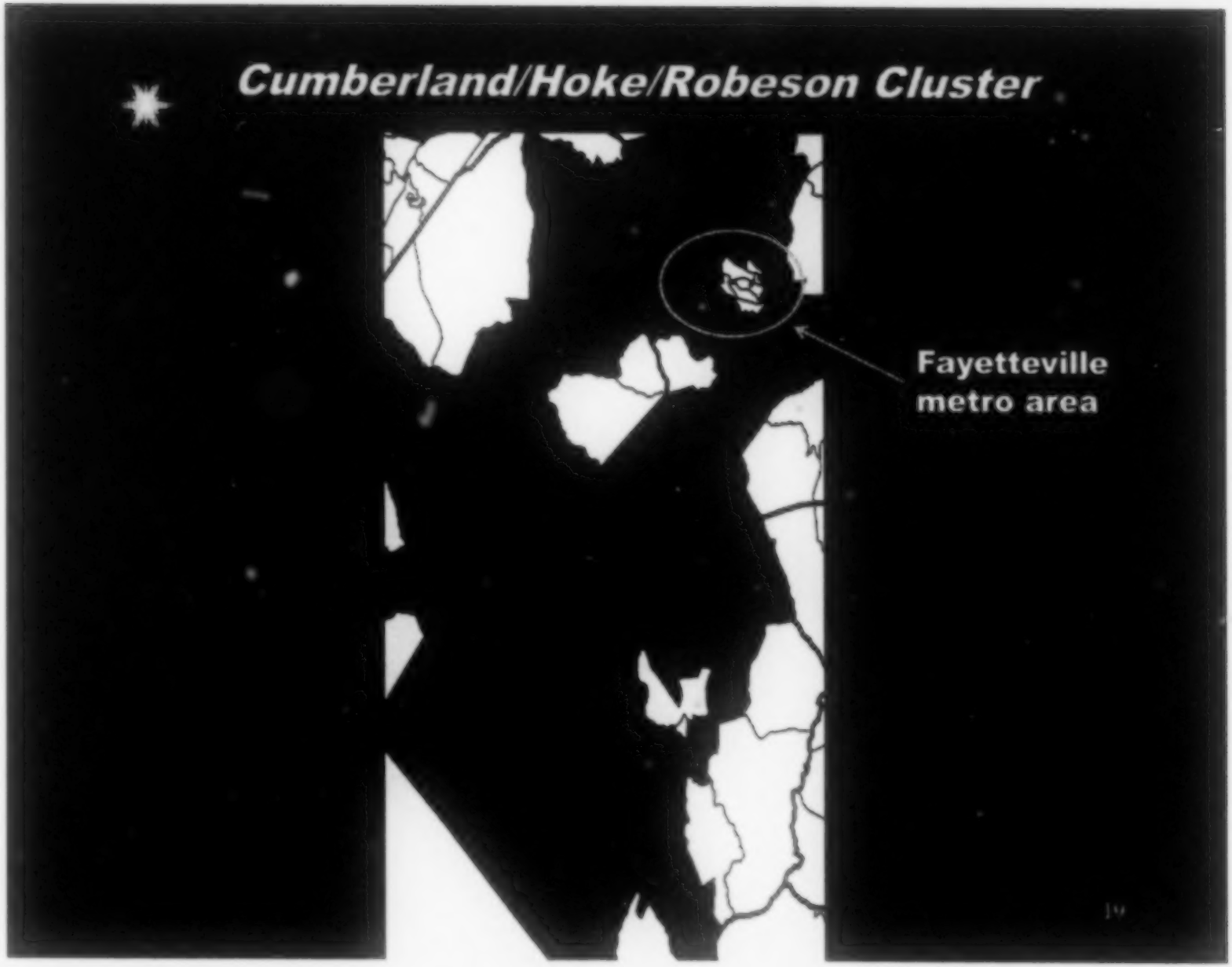
Cumberland/Hoke/Robeson Cluster

Figure 3. North Carolina Partisan Cluster Analysis



Cumberland/Hoke/Robeson Cluster

Cumberland/Hoke/Robeson Cluster



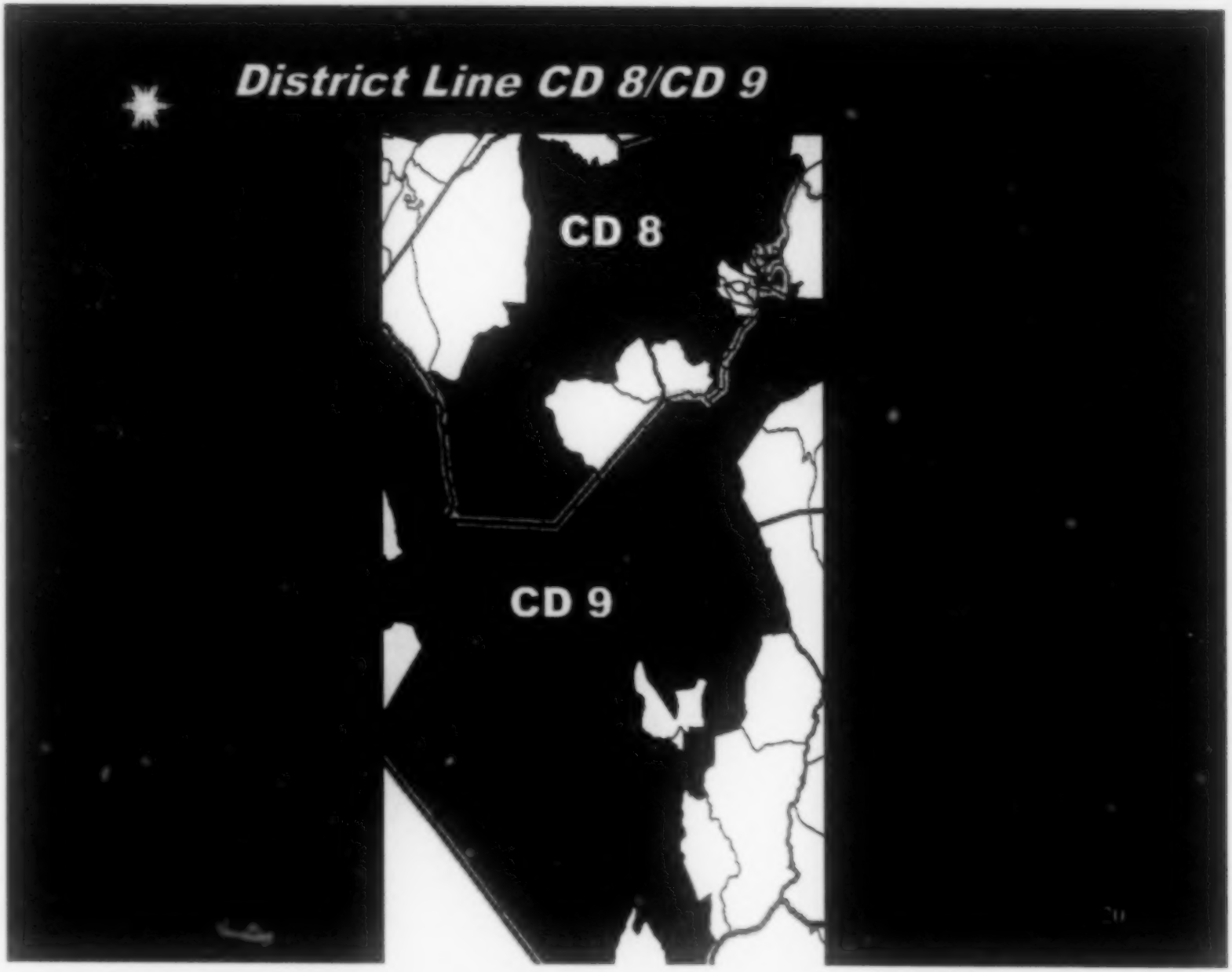
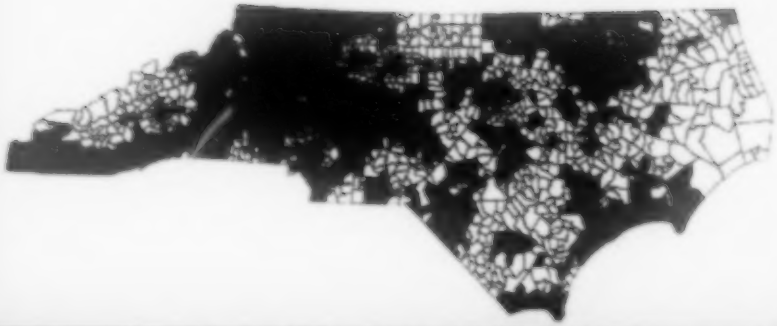

District Line CD 8/CD 9
CD 8
CD 9

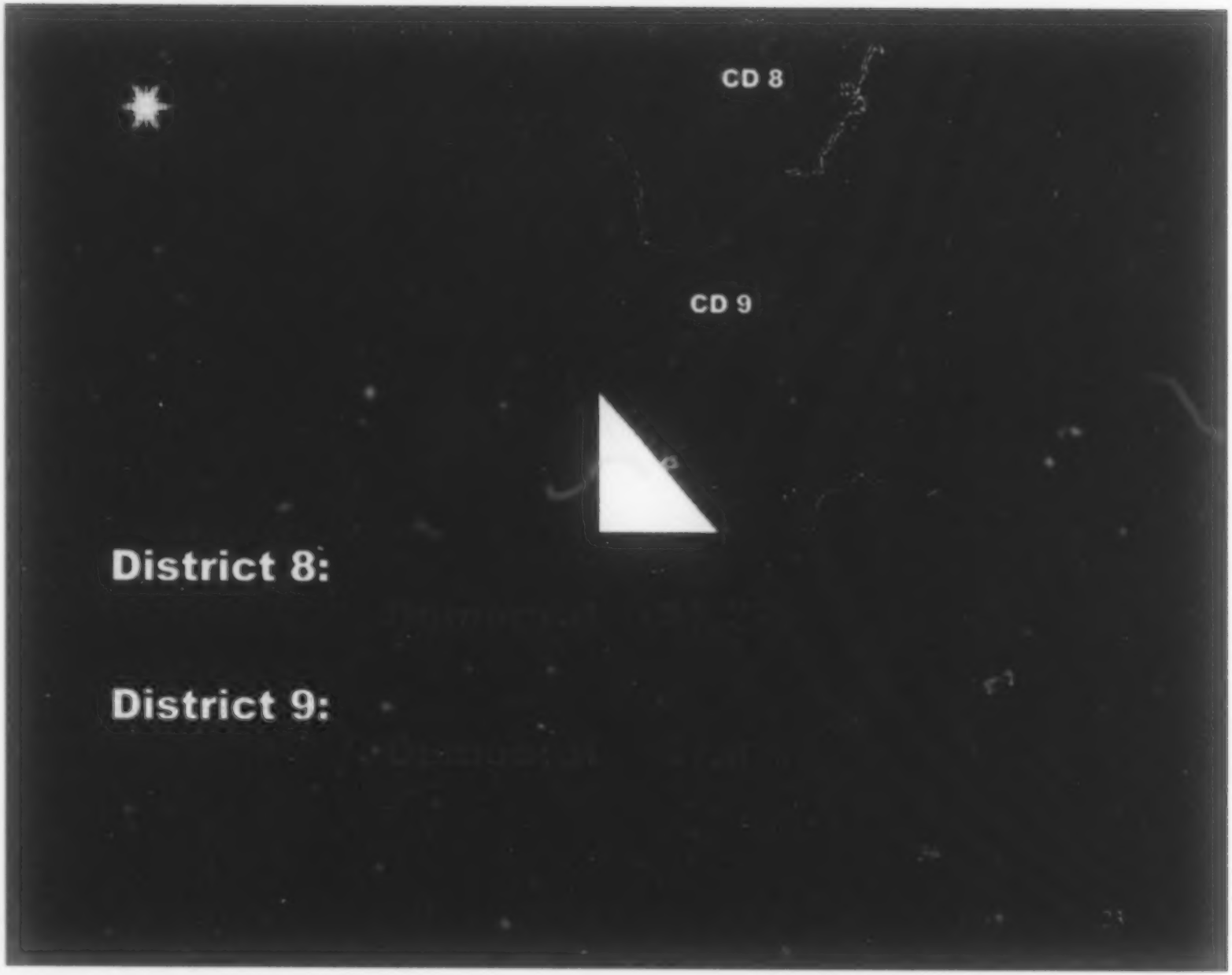
Figure 3. North Carolina Partisan Cluster Analysis



"Clustering of partisans can lead to *natural* packing of such groups in the redistricting process." p. 10

True/False:

What happened in Cumberland/ Hoke/Robeson counties was the legislative cracking of a Democratic partisan cluster in the redistricting process.

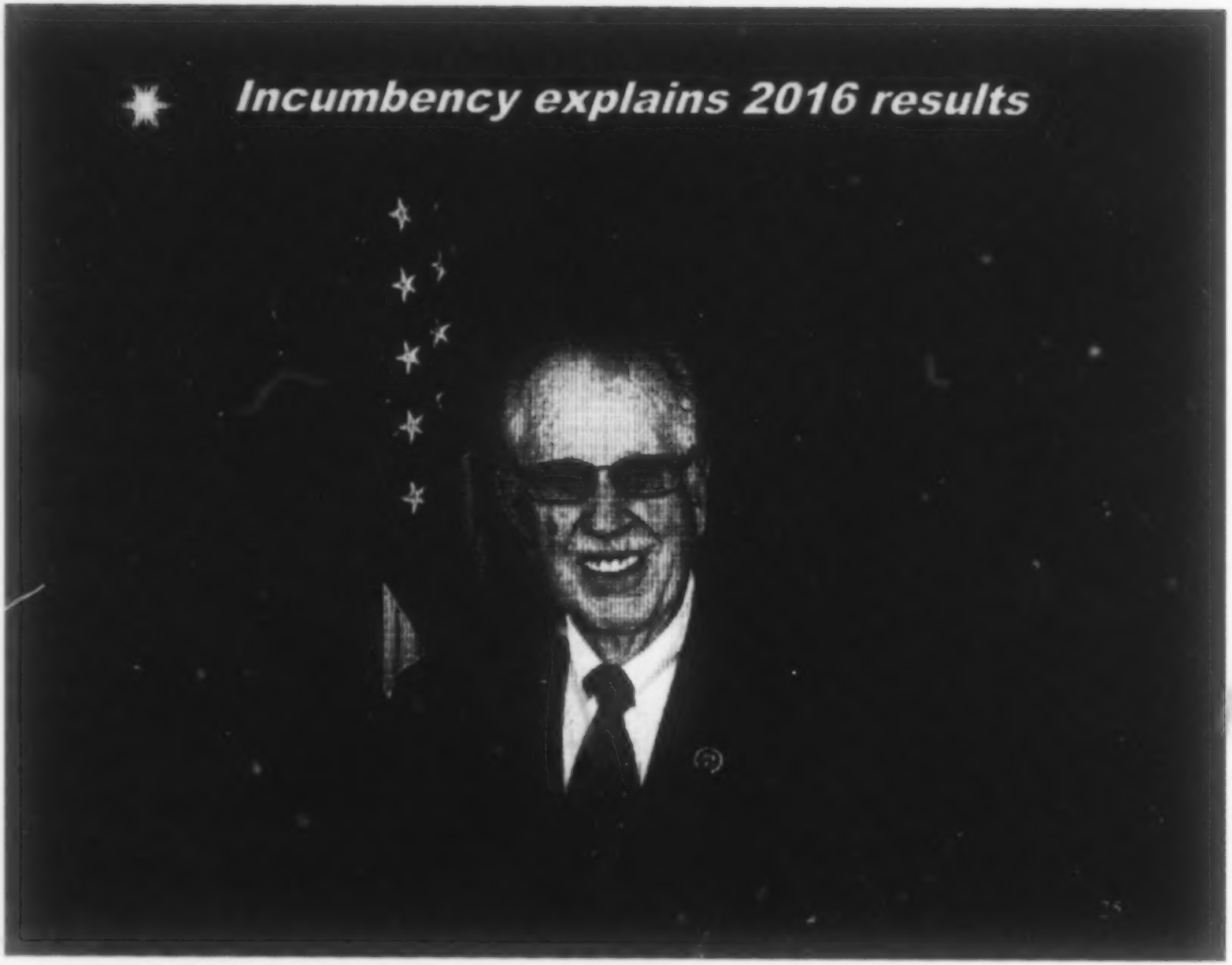

CD 8
CD 9
District 8:
District 9:

Incumbency explains 2016 results

"Incumbents are highly likely to win reelection, especially when faced with challengers of little or no political experience. Of the twelve incumbent races in 2016, 10 (or 83%) featured a challenger with no political experience[.]" p.5

"In every race featuring an incumbent, the incumbent outspend [sic] their challenger by an average of $1.2 million." p. 6

"In conclusion, there is little doubt that factors other than redistricting . . . helped produce the noted ten to three partisan division." p. 7


Incumbency explains 2016 results

Congressman Roscoe Bartlett (R. Md.)
6th District (1993-2013)

District Core Retention

Table 9. 2016 Congressional Districts-Core Retention

District	District Core Retention
1	69.5%
2	56.6%
3	80.6%
4	62.1%
5	73.1%
6	50.0%
7	71.9%
8	42.4%
9	39.3%
10	95.6%
11	96.5%
12	52.1%
13	0.0%
Mean	60.8%

District Core Retention

Table 9. 2016 Congressional Districts-Core Retention

District	District Core Retention
1	69.5%
2	56.6%
3	80.6%
4	62.1%
5	73.1%
6	50.0%
7	71.9%
8	42.4%
9	39.3%
10	95.6%
11	96.5%
12	52.1%
13	0.0%
Mean	60.8%

District core retention
MD CD 6 = 51%

Excerpts from Transcript of Bench Trial, Direct Examination of Dr. Jonathan Mattingly (Oct. 16, 2017)

...

[34] Q And what is the date that that was last published on that archive?

A It's date stamped 8th of May 2017 on the left-hand side on the margin.

Q Is that article that we're looking at behind Tab No. 4 available for anyone in the world who has an internet connection to see?

A Yes, it's publicly available.

Q Is it your intention to publish that article in a referee professional journal?

A Yes.

Q All right. My next questions are going to zoom in on some of the big picture conclusions that you state in that article behind Tab No. 4.

Before we get to the specific conclusions, I would like you to very briefly describe how you and your students went about evaluating the 2012 and 2016 Redistricting Plans adopted by the General Assembly as well as the Judges Plan. What was the means or mechanism to do that?

A So we generated a large number, over 24,000 maps, that adhered to the bipart -- the nonpartisan redistricting criteria laid out in House Bill 92. Then we took each of those maps, and we took the actual vote count from the 2012 or the 2016 elections, and we saw what outcome that map would produce, and then we tabulated all of those statistics, the outcomes of

each [35] of those elections, as well as the partisan makeup of each of the districts, and then we used that to provide a background against which we could evaluate the Judges maps or the 2012 maps or the 2016 maps.

Q Okay. On page 3, in the second full paragraph of your article, "Redistricting, Drawing the Line," you say that the 2012 and 2016 Redistricting Plans produced results that are, quote, extremely atypical. What did you mean by that?

A What I meant was that over 99 percent of the maps we looked at produced more Democratic seats than those maps did.

Q In the next sentence, you say, quote, finer analysis clearly shows that the Democratic voters are clearly packed into a few districts, decreasing their power, while Republican voters are spread more evenly, thus increasing their power, unquote. What did you mean by that?

A So what I meant was that the maps we -- this ensemble of maps you created gave us a baseline, and when you compared the percentages in the most Democratic districts to those -- that baseline, there were clearly many, many more Democrats packed into those Democratic districts; and on the other hand, that allowed there to be many more Republicans in the next group of districts.

Q On page 9 of your article, just before Figure 6, you state that the 2012 and 2016 Redistricting Plans, quote, were precisely engineered and tuned to achieve a partisan goal, [36] unquote, and that, quote, the components of those plans were not randomly chosen, unquote. What did you mean?

A Well, we also did analysis where we moved slightly the boundaries of each of the districts to see how the makeup would change, how the partisan makeup would change, and we saw that when we shifted just as little as 10 percent of the boundary, the makeup of the districts changed dramatically. So if you were just to -- and I should say this is all nearby the actual maps. So if you were just to pick a map randomly nearby those maps, you would find a map that was very, very different.

Q And very different in what way?

A Much, much less advantageous to the Republicans.

Q By the time you concluded your work on this project, Dr. Mattingly, how many simulated plans or maps did you and your students come up with that would have satisfied what you would consider to be traditional redistricting criteria?

A Almost 120,000.

Q And from that, you ultimately selected how many? From that, how many were talked about in your article primarily?

A The main group -- because we started doing the analysis before we had -- the runs had completely finished, we used just over 24,000.

Q And of the 24,000 and of the 120,000, based upon your analysis, how many -- in how many of those plans, whether it was the 24,000 or the 120,000, would Democrats have scored more [37] congressional seats -- would have won more congressional seats than they did in the General Assembly's 2012 and 2016 Redistricting Plans?

A 99 percent -- over 99 percent.

Q Based upon the work that you did with your students, Dr. Mattingly, are you able to address the degree of partisan gerrymandering represented by the General Assembly's 2012 and 2016 Congressional Redistricting Plans?

A Yes.

Q And based upon that same work, are you able to address which of the districts in those plans are most affected by partisan gerrymandering?

A Yes, we can.

Q Dr. Mattingly, have you assisted us in preparing a PowerPoint presentation to help illustrate the work you and your students undertook that led to both your report in this case and to the article that we've been referencing?

A Yes, I did.

Q Is there anything in that PowerPoint that represents new or additional work beyond the work covered in the article, "Redistricting, Drawing the Line," that we were looking at, Exhibit 3004?

A There's not.

Q And would using that PowerPoint today assist you in both condensing and illustrating your testimony?

...

[49] A So we -- we calculated what - - how many - - there you go. We calculated it using the Judges Plan. So the Judges redistricting map, there would've been nine -- I mean, six Democrats elected, excuse me, six Democrats elected.

Q Okay. And what about the North Carolina 2012 Plan?

A There would've been four Democrats elected.

Q All right. And what about the North Carolina 2016 Plan?

A So, again, four Democrats. It's important to remember that we're still using the 2012 votes. We're just using the plan from 2016. So if we used the 2012 votes in the 2016 plan, we would have had four Democrats elected.

Q Okay. Let's go to this next slide, which I think is going to require some more explanation; but before you do, I'm going to read the title. It says: "Analysis of 13 Districts in Simulated Maps, Votes for US House 2012." Now, please take some time and explain to the Court what we're looking at in this slide.

A So the broad picture is we're trying to understand what that background signal was, what -- how -- the geopolitical makeup of North Carolina, both the shape of the state and where the people live, and the partisan makeup of where they live would give us -- would tell us what we would typically see. That's what we're trying to get at.

So to establish that, what we did was we took every map that we generated, every map that we had, and we ran the [50] 2012 elections. So we have 13 congressional districts. There's the most Republican, the second most Republican, the third most Republican, the fourth most Republican, the most Democrat, the second most Democrat. So we ordered those numbers, in other words, what's the percent -- the fraction of Democratic vote -- the percent of

Democratic vote, and we ordered the districts from the most Republican to the most Democrat. So that's these 13 numbers. These are not the numbers associated with the districts as we see them when we talk about District 12 or District 1. These are just the most Republican, the most Democrat.

So we take those 13 numbers for each of our maps, and then we make this plot to summarize those statistics. So what this plot shows you is that if you took the most Democratic map, most Democratic -- I misspoke -- the most Democratic district in each of the 24,000 maps, so if you took the most Democratic district in each of the 24,000 maps and you said what was the fraction of Democrats in that map, the median would be just around 67 percent, and how could that be helpful to you? You might -- somebody might come to you and say, you know, isn't it weird that this district has 67 percent Democrats in it? That seems nefarious, but if, in fact, it was the most Democratic district, that's what you would expect to see. Just typically when you draw maps of North Carolina, that's what you end up with.

[51] And then we did the same for the twelfth most Democratic, the eleventh most, the tenth most, the first most Republican, the second most Republican, the third most, the fourth most Republican.

Now, just to unpack a little bit what this figure shows you is the central line here is the median, which in these cases is identical essentially to the mean. So it's the line that splits 50 percent above and 50 percent below.

Q 50 percent of the 24,000 --

A Yes.

Q Okay.

A And then this box here, this is called a box plot, if you want to look it up later. So this box here holds 50 percent of all the maps. So all the maps had their most Democratic district with a percentage that was in between these two -- these two upper levels of the box.

Q You said "all." Did you mean 50 percent?

A I meant, yeah, 50 percent. I misspoke. Then there are these whiskers, and these whiskers are supposed to demonstrate what are outliers, what are exceptionally far from the mean, and the reason these are chosen, these are 1.5 times this box distance, and that's for the reason that if something was Gaussian, if something was normally distributed, 98 percent over 98 percent would be outside of these whiskers.

Q Okay. Talk about the 50 percent line, that dark in the [52] line. What is that showing us with respect to each of these districts?

A Well, I mean, as we all know, whoever gets the most votes in a district, wins the seat. So this line is the 50 percent line. So if a map had -- each of these maps is a dot going up here, has the number of dots that are above this line is the number of seats the Democrats won, and the number of dots below this line is the number of seats the Republicans won. So we saw in the previous plot it was between six and seven typically, right. And you notice that it's exactly the seventh most Republican district that straddles the 50 percent line. So it's exactly typically split between 50

percent of the time favoring the Republicans and 50 percent of the time favoring the Democrats.

Q And in your box plot, would that be the most competitive district, the seventh most Republican district?

A Yes, this would be the most. I mean, it would be essentially -- depending on the map, it would be 50/50 to be more favoring the Democrats and more favoring the Republicans.

Q Is that always going to be true, or it depends upon the elections -- the votes that you're dropping in?

A It depends upon the election. So, typically, what we see is if this general structure of the box plot looks the same, but in the year when the populous vote is more Republican, then necessarily the whole box plot shifts downward, thereby putting [53] more of the boxes below the 50 percent line, and in a year when the populous vote is more Democratic, the box plot shifts upward, thereby putting more of the boxes above the 50 percent line.

Q In other words, the line always stay -- the 50 percent line always stays in the same place?

A Right.

Q And the box plot is up or down?

A Right.

Q Okay. Which are the least competitive districts in this box plot?

A Clearly, the most Republican usually goes to the Republican Party, and the most Democratic district tends to go to the Democratic. We're separated enough

geographically that we're not mixed in a blender. It's spread evenly over the state.

Q Does this box plot also show you the variability of the outcomes within individual districts?

A Yes. I mean, this says that over different maps, we typically had a variation of this much in the percentage of most Democratic, and, in particular, this one it shows that about half the map favored the Democrats a little bit and about half the map favored the Republicans.

Q Which of these districts on this box plot shows to be the most variable in your ensemble?

[54] A I mean, it's close, but I would say this one. I mean, it both has the biggest outliers and the biggest 50 percent box.

Q And which would be the least variable?

A This sixth most Republican district. It has a very tight 50 percent box and a rather tight outlier box.

Q And just to make sure we're clear on this, the numbers at the bottom on the horizontal axle, the two, the four, the six, the eight, the ten, the twelve, they represent what?

A They do not represent the labeling that we used, the twelve districts. They represent how they order -- how the lines order, whether they're the most Republican, the second most Republican, the third most Republican, the most Democrat, the second most Democrat, the third most Democrat.

Q Okay. Let's move forward now, and you've drawn on this next one the exact same box plot with a

yellow line. Tell the Court, if you would, what the yellow line is representing and what you believe the significance of that yellow line is.

A Well, the yellow line connects all the medians through the center. So this gives you some idea of typically what one would expect to see, given the geography of North Carolina and what -- the distribution of people in North Carolina.

Q Okay. And remind the Court what the inputs were that went into getting a yellow line looks like that.

A So we used the 24,000 maps to tabulate the actual votes from the 2012 election and see how much they varied across maps.

Q And the 24,000 maps were created using what criteria?

A They were created using the nonpartisan criteria laid out in House Bill 92, just population deviation, compactness, not splitting counties and satisfying the VRA, at least at the level of the 2016 congressional maps.

Q And in all of the work that you've done on gerrymandering issues, in your opinion, is the shape of that yellow line significant?

A Yes, I mean, this -- when I started off talking, I said we wanted to understand was the 2012 typical, you know, what would one expect. This gives a much finer detailed structure of what one would typically see. This is kind of the signal in the election, as far as I'm concerned.

Q Of how the voting in the individual districts compare to one another?

A Correct.

Q All right. What would you expect to see if the districts had been gerrymandered to give one party an extreme partisan advantage?

A Well, let's say that they had been biased to the Democrats. You would expect to see a depression here where many Republicans are impacted here, and then some districts where they had been removed from, or, alternatively, if it had done the other way, if it had been given the Republicans an [56] advantage, you would have many more Democrats packed in the most Democratic districts, and then the Republican districts the next set of districts would have many more Republicans because that would bring it down towards the 50 percent line.

Q And what would the line as a whole -- instead of that gradual sloping yellow line, what would that line look like?

A Well, I mean, it would be flatter here, and then it would jump up particularly to a flatness here, so it would have an S-shape there.

Q All right. Go ahead and tell the Court what you've done on this next slide that adds more information.

A So I've added the green dots. Green is always the Beyond Gerrymandering Project with Tom Ross. So these are the districts that the panel of six Republican and six Democrat judges produced, and we see that they're pretty good, especially right here in the middle part. They fall at least sometimes dead center, but usually typically pretty close to the 50

percent box. Definitely none of them are in the outliers.

Q And what criteria did the Beyond Gerrymandering Project use to create their map?

A They -- they just followed House Bill 92.

Q With respect to this issue of gerrymandering, did the green dots tell you anything as to the Judges Plan, what they produced?

[57] A Well, I mean, i t seems to be very typical. It follows very closely that yellow line we had before.

Q Okay. This is -- explain to the judge what we're looking at in this next slide with the red dots.

A So this is now the makeup of the districts for the 2012 Legislative Plan, and you see very much what I was talking about before. You see that these most three Democratic districts have an anomalously large number of Democrats packed into them, and these four or even five districts here have many less Democrats than they would typically see.

Q Okay. And these were actual districts voting in the 2012 election?

A Right. These are where these are -- these box plots are the signal from my ensemble of 24,000, these are the actual makeups of the election results.

Q And when we're looking at the previous slide, which I'll go back to for a second, those weren't actual votes that created those green dots. What were they?

A They were actual votes.

Q I 'm sorry. They weren't actual votes in an election with the judges map?

A No, they were using the votes at the precinct level in the 2012 election, but then assigning them to districts according to the judges maps.

Q Okay. As you did for your ensemble?

[58] A Correct.

Q Okay. Let's go ahead now. What labeling have you added to the horizontal axis on this slide?

A So now we've actually replaced them with the numbers that one usually thinks of Congressional District 1, Congressional District 12, Congressional District 7, 4. So you can see where they fall in this ordering of districts, starting at the most Republican and the most Democratic.

Q The most Republican was?

A The most Republican was District 3.

Q And the most Democratic?

A District 12.

Q The box plot with the whiskers and the box in the middle, are those specific to those districts you see on the horizontal axis?

A No, no, these have nothing to do with these numbers. These are from our redistricting. The number here just applies to this number here, the actual outcome of the 2012 election. So this is --

Q I'm sorry. Are you ready to go to that slide?

A Yes.

Q Okay. All right. So let's go to this next slide in which you've added a whole bunch of additional labeling. Take your time and tell the Court what additional labeling you've added.

A So just to help ground this and make sure that we all [59] understand what we're talking about, I've added the percentages of -- the Democratic percentages in each of the districts. So in that election, the most Democratic, District 12, had 79 percent Democrats. The next one had 76, District 1. The next one had 74, District 4.

And if you compare those to what we would expect from our ensemble, the medians had a difference of plus 11 here, plus 14 percent, plus 15 percent. So there were many more percentage Democrats in these districts than what we typically see, and, conversely, in the next four, there were many less Democrats. In fact, this one had 50 percent Democrats when normally one would expect to see 57 percent Democrats, the next most Republican had 49 percent when one would typically see 55 percent, and then 46 percent when one would typically see 52 percent, and 44 percent when one would typically see 50 percent.

Q Did you consider those differentials that you were just looking at as between the median vote in your ensemble and the actual vote in 2012 significant with respect to this issue of partisan gerrymandering?

A Yes, I mean, this shows that these districts have been moved to become Republican, while these have been made even safer Democratic.

Q What's the relationship between safer Democratic seats and districts that can become more Republican?

[60] A Well, you have to take the votes out of here and move them here, and that's what this clearly shows.

Q Okay. This next slide has added a little bit of more information. Can you tell the Court what additional information is on this slide?

A Right. So what you want to understand, though, is that a typical result? Are there some of our 24,000 elections in my ensemble that have that structure? And what this gives is this tells you -- for instance, each of these numbers here gives the percentage of the maps in the 24,000 ensemble, which had a value above this whisker. So 99.99 percent had values below this whisker, and this is this map, the 2012 map.

None of the maps in my ensemble had values as high as this whisker here, and this is the value for the 2012 map. 99.31 percent had a value below this whisker, and this is the value for the 2012 map. Conversely, you would want to know how many are below this whisker or how many are above. So only 1.5 percent, just over 1 percent, had a value below this whisker, and this one is all the way down here. Similarly, at this whisker, only .43 percent had a value -- had a value or percentage below this one, .04 percent had a value below this whisker, and. 07 below this. We label these as "extreme outliers" one by one.

Q Does this slide, in your opinion, present any evidence regarding partisan gerrymandering of individual districts?

[61] A Yes, I mean, since you can look at these districts, it seems to say that this clump of districts -- for instance, let's start here. This clump of districts here, 4, 1, and 12, actual Districts 4, l, and 12, had significantly more Democrats than one would typically see, even though they are the most Democratic, and

then the next four had many, many less Democrats than what we would expect to see.

Q Dr. Mattingly, did you actually add up how many Democratic votes there were in the three most Democratic districts, 4, 1, and 2, in that election?

A I did.

Q Do you have your cheat sheet telling you how many?

A There were 765,000.

Q Democratic votes?

A Democratic votes in these three.

Q And then for -- well, let me ask you: In your ensemble of maps, 24,000, how many had that many Democratic votes?

A None.

Q Okay. For the next three districts, the ones that are -- on your map, they are District 7, District 9, and District 8. Can you tell the Court how many Democratic votes were in those three in the actual election?

A So these had 665,000

Q I'm sorry. No --

A 765,000, and these three here had only 520,000.

[62] Q How many simulated maps in your 24,000 had that few Democratic votes in those districts?

A None did.

Q And is that significant in your opinion?

A Yes. I mean, it shows that if one were to draw maps using these criteria, it was extremely unlikely to

ever end up with a situation like this. In fact, it was essentially -- it was impossible.

Q In your opinion, could the legislature have created a redistricting plan that yielded those specific results unintentionally?

A No.

Q Okay. Let's go to the next slide. Tell the Court what we're looking at. It says: "Comparison of Results: Ensemble, Judges, NC 2012." What are we looking at, and what do you find significant?

A Well, so, as I said, this yell ow line that connected the medians was my background signal. It's what I would typically expect to see, and you might ask, well, could a set of human beings sit down and draw such a map. Well, the judges did without having access to this. We did this after the fact. So the judges drew the maps that created this green line, which very closely adheres to the yellow line. On the other hand, you see the legislature's maps are very flat here and then take this huge jump and go up here. So for me, when I see anything [63] like this, a plot like this, this kind of S - shape thing, you know, this is what I mean by gerrymandering. This is the signature of gerrymandering.

Q All right. Now, we've just been through the 2012 Plan and looked at the 2012 votes that actually occurred under the 2012 Plan. Did you perform the same exercise for the 2016 Plan and the 2016 votes?

A Exactly the same exercise.

Q All right. Let's go through it, and let's start with what you called the histogram, showing the outcomes in 2016 using the 2016 Plan?

A All right. So, again, we typically had five Democrats elected. So this is a year when there was more -- the vote was more Republican, so 53 percent Republican and 47 percent Democrat. So only five were elected, Democrats, and sometimes four and sometimes six typically.

Q Okay. And what were the percentages of those three?

A Just under 28 percent had four, just over 55 percent had five Democrats elected, and just shy of 16 percent had six.

Q So would it be correct to say that in over 99.3 percent of your 24,000 simulated maps, four or more Democrats would have won congressional races in 2016?

A Yes, that's just adding up the percentages in these --

Q And in over 71 percent of those simulated maps, five or more Democrats would have won?

...

[69] percent, plus 6 per cent, plus 5 percent, and then these next three districts had 44 compared to 54, so minus 10 less Democrats; 51 to 43, minus 8; and 48 to 42, minus 6.

Q Okay. Does this let me back up. Let's go to the next slide -- well, let me sorry, I apologize. Did you consider those differentials at the bottom of the slide to be significant on this issue of partisan gerrymandering?

A Yes, I mean, this is, again, the structure which makes -- this kind of structure like this is the signature of something being gerrymandered.

Q With respect to the numbers at the bottom, the minus 10, the minus 6, what is that telling us on this topic of partisan gerrymandering?

A That these districts had many, many more Democrats than typically is found if one were to draw bipartisan maps.

JUDGE WYNN: Counsel, I'm concerned of the record that's being created here. We don't have a visual of this, and when you say these districts and don't specify where they are, we are not going to have a clear picture of what you're talking about upon review of this. So if you would direct him to be more specific so that we can have the record of this.

MR. EPSTEIN: Thank you, Your Honor.

BY MR. EPSTEIN:

Q Can you be more specific, when you're talking about these districts, what you're referring to?

[70] A So the three most Democratic districts, the one farthest to the right, have many more Democratic votes than one would expect to see if one looked at the medians or the box plots for those three districts that are the most Democratic, and then when you compared the next three most Democratic, that is, the next three after those first three, one sees that they have many less Democratic votes than one would expect when one compares to the medians, that is, the lines in the center of the box plots.

JUDGE OSTEEN: The actual district is down on the bottom, right?

THE WITNESS: Yeah, these are the actual numbers of the districts, so it's the very bottom of the slide.

JUDGE OSTEEN: So I think when you're talking about the most Democratic district, if you'll identify that as CDl, CD4, and CD12 in addition to what else you're going to say.

THE WITNESS: CD?

JUDGE OSTEEN: Or D. You used D.

THE WITNESS: D here is the actual district on the map. So that one just happens to be one. This would be the second most Democratic district, which is labeled District 4 traditionally, if you use the maps. Now, that doesn't mean that it exactly corresponds to the most Democratic district in every one of the ensembles. Where that is geographically can move around, depending on the random map.

[71] BY MR. EPSTEIN:

Q Okay. And I think this next question, Dr. Mattingly, will help orient us to the most Democratic districts. Did you add up how many Democratic votes there were in the three most Democratic districts in 2016, District 12, District 4, and District 1?

A So in the three most Democratic, three farthest to the right, there were just around 750,000 Democratic votes.

Q How many simulated maps in your 24,000 had that many Democratic votes using the 2016 votes in their three most Democratic districts?

A None.

Q Did you add up how many Democratic votes there were in the next three most Democratic districts, which were District 13, District 2, and District 9 in 2016?

A Yes, just shy of 600,000.

Q How many simulated maps in your 24,000 had that few Democratic votes using the 2016 votes in the fourth, fifth, and sixth most Democratic districts combined?

A None of them did.

Q Is that significant in your opinion?

A Yes.

Q Why?

A It means that it's extremely unlikely that one would have produced maps that had that level of packing here and that [72] level of depletion here unintentionally or using nonpartisan criteria.

Q All right. Let's go ahead and look at the next slide. We've added in the information about those whiskers, and be specific, when you're talking about individual district and the whisker, which district you're talking about.

A Okay. Again, now we're going through -- if we look at each of these districts, how atypical was the value of percentage in that district, as high or as low as it was.

So in the first most Democratic district, the one farthest to the right, which had 70 percent Democrat and is above this whisker here, that top whisker, only .61 percent of the maps had a value above that whisker. Similarly, for the next one moving to the left,

none of the maps had a value above this whisker, while the maps from the legislature did. Moving to the third one in from the left, only .07 percent, or, in other words, 99.93 percent, had a value below this whisker, while the maps from the legislature had one just above it.

Then moving to the districts which seemed to have less Democrats in them, the fourth most Democratic district, moving from the left -- from the right, sorry, had -- below the whisker only .19 percent, or 99.81 percent, had a value -- had a value above this whisker. So this was very atypical. It was very much an outlier, and the same thing as with the last two with .53 percent being below this whisker and only .02 being [73] below this whisker. Now, this one falls just above that, but it's still well outside of this box.

Q And what does the information that you've just been through, the whiskers and where the plot points for the Republican Plan comes -- what does that tell you about how likely the result obtained would be if only neutral nonpartisan redistricting criteria had been used?

A Well, based on the ensemble that we generated, these would be essentially impossible to generate randomly. They would be so highly atypical that one would not see it.

Q And in your opinion, could the legislature have created a redistricting plan that yielded the results we're looking at on this slide unintentionally?

A No.

Q All right. Go ahead and tell the Court what we're looking at in this slide with reference to comparing results in the 2016 -- with the 2016 votes.

JUDGE BRITT: Mr. Epstein, let me ask you another question that follows what Judge Wynn said. Do these slides follow some of the drawings in the paper?

MR. EPSTEIN: They do, Your Honor. There's a little bit more precision in them in terms of -- these lines are all there. They're just not -- the plot points aren't connected. They are the same exact graphs and charts as are in the paper with differences. Here the lines are drawn in.

[74] JUDGE BRITT: Well, I was just wondering if it would be helpful for the record, Judge Wynn, for this to be when he's talking about a slide, to refer to a figure in his paper.

MR. EPSTEIN: Your Honor, actually, it might be easier. We have -- I was going to ask at the end to introduce this as an exhibit and have it admitted for illustrative purposes. We have them, and we can hand them to the Court either now or at the end of his presentation, but we do have them.

JUDGE BRITT: At the end would be fine.

JUDGE WYNN: Actually, I think it would be helpful to hand them now, and then we can point to them. Where we're going with this is that when we review this and if you just say "this" and "that," we're going to have some difficulty ascertaining what you mean, and simply all you got to do is point to the particular slide, indicate the figures that you were

talking about, and it's going to be pretty easy. We're smart, but we're not that smart, I don't think.

MR. EPSTEIN: If Your Honor can give me a moment, I can have our paralegal sort through them and hand them out right now.

JUDGE OSTEEN: Let's take about a 10-minute mid-morning recess, and then we'll come back.

(At 11:05 a.m., break taken.)

(At 11:20 a.m., break concluded.)

[75] JUDGE OSTEEN: Before we resume testimony, in terms of exhibits, my normal practice is the witness is handed an exhibit. It's -- the witness identifies the exhibit. We take a moment to see if there are any objections. If not, move the admission of the exhibit, and then we have it in front of us.

Even with the screens, especially with three judges on the bench, it's difficult. So going forward, to the extent we have paper copies for the Court -- I know I asked for zip drives, but if you don't have them for me, don't worry about it; but if you have paper copies, go through that process so we actually have our copy of the exhibit in front of us while you go along .

MR. EPSTEIN: Thank you, Your Honor. At this point, first of all, I would note that we do have zip drives for the Court, law clerks, and everyone, which we'll be happy to distribute at a break, but we would move the admission as an illustrative exhibit Plaintiffs' Exhibit No. 3040.

JUDGE OSTEEN: All right. Any objection to that?

MR. STRACH: No, Your Honor.

JUDGE OSTEEN: Plaintiffs' Exhibit 3040 is admitted.

MR. EPSTEIN: May I ask the witness to resume?

JUDGE OSTEEN: You may.

BY MR. EPSTEIN:

Q Okay. Dr. Mattingly, before we took our break, we were looking at this slide that says "Comparison of Results" and [76] it's Ensemble, Judges, NC 2016, and it's using the 2016 votes. Using your pointer, please, can you walk you us through what you find significant about this slide.

A I think it's probably a good idea if I used the colors. That way it will help everyone know what I'm talking about.

JUDGE BRITT: I'm not getting any feedback from that microphone right now. Can anyone tell me why?

MR. EPSTEIN: Please speak more loudly.

JUDGE BRITT: It was probably my -- it's clear now.

THE WITNESS: Is this too loud, or is this good?

JUDGE BRITT: No, no, it was not your problem. I t was right here.

THE WITNESS: All right. So the yellow line that passes through the centers, that's through the median, and that's what I would -- it's typically typical given what we see in our ensemble, and then the green line, which passes very close to the yellow line, is what the Judges map produced, and this blue line deviates quite a bit. This is the NC 2016 Plan. And so, once again, we see the same kind of S-like structure that we saw before.

BY MR. EPSTEIN:

Q And what is significant about that S-like structure to you?

A Well, it is a signature of gerrymandering in the sense that these have many, many more -- many, many more Democratic [77] votes, that is to say, the right most three, the three most Democratic districts have many more Democratic votes than one would typically see, and the next three have a very flat structure with many less Democratic votes than one would typically see.

Q And for the record, just for the Court, I'll refer to this as Slide 30. I should have been doing that from the beginning, and I apologize for not doing that so the record is little bit clearer.

Dr. Mattingly, did you do any work to validate the results of your work to make sure that they weren't overly influenced by one factor or another?

A We did.

Q What did you do to validate your results, among other things?

A Well, one thing we did was -- you might ask was this enough samples? Di d we sample this distribution on redistrictings well enough? Did we have enough maps? So --

Q Going to Slide 31, can you answer that question?

A Yes. So what I've been describing to you largely is the result of using 24 -- just over 24,000 maps. We also took a longer run of just shy of 120,000 maps, and using those maps, we produced the histograms, the

two we've been talking about, the histogram that shows the election results, and you see that there's essentially no deviation. The blue is the smaller

...

[91] construction. From all of our maps, we had these criteria so they complied with the Voting Rights Act. When you see that typically we get this yellow line, and then the judges, when they drew their maps, which also complied, produced the green line, and so there's no -- there's no -- there's nothing in that that necessitates a structure which would give this S-shape and these packing here and these depletions here, and I should be careful. When I say "here," I mean in the first three to the right on the left - hand panel and the first three to the right on the right-hand side panel, and then the next three in from those three on both panels being depleted, being below the box plots.

Q And let me ask that question in a slightly different way.

What does this slide tell you about whether the need to comply with the Voting Rights Act or to draw two highly populated African-American voting-age population districts could explain the partisan distribution of congressional seats resulting from the 2012 and 2016 Plans and elections?

A It doesn't explain it.

Q All right. Now, Dr. Mattingly, you told us earlier when we started that you began this project with Ms. Vaughn before Mr. Speas ever knocked on your door, trying to figure out if the political geography of North Carolina and the distribution of where voters lived in North Carolina, whether they be

Democrat or Republican, could by itself explain the partisan [92] outcomes of our congressional elections during this decade.

Did you figure out the answer to that question in the work that you've been describing to the Court today?

A We did.

Q And can you use those -- that slide and those graphs in front of you to explain your answer to that question?

A Yes. So by using this ensemble of 24,000, we discovered what the background structure in the geopolitical makeup of North Carolina is, its geography, where its people live, where its voters in each party are distributed, and where the African-American population is, and what that necessitates relative to the Voting Rights Act. And what we see is -- this yellow line and these set of boxes shows what we typically see when we draw in a nonpartisan way, and as you can see, that's very different than this type of packing, this packing here to the most three right in each map, and then this depletion of voters in the next three. That's a very different structure than what one would see just based on the geography and the geopolitical distribution of people in North Carolina.

Q And, Dr. Mattingly, if it's not the political geography of North Carolina that explains the results of our congressional elections over the past decade, what, in your opinion, does explain those results?

A Well, we did another analysis where we looked at the boundaries of the maps, the boundaries of each of the [93] districts, and we moved the boundary

around 10 percent, and we saw that drastically changed the outcomes, the makeup of these districts, and we found that it did for the 2016 and 2012 maps, and it didn't for the Judges. So that seems to say that it was not just randomly chosen from a map that looked like that. It was very specifically tuned.

Q And specifically tuned to do what?

A To develop this type of partisan advantage.

MR. EPSTEIN: Those are all of my questions, Your Honors.

JUDGE OSTEEN: Cross-examination?

MR. STRACH: Yes, Your Honor, thank you.

CROSS-EXAMINATION

BY MR. STRACH:

Q It's still morning. Good morning, Dr. Mattingly.

A Good morning.

Q I'm Phil Strach. We met a couple of times at your depositions. This stuff is fairly complicated, so I'm going to try to keep it as simple as I can keep it, but if I oversimplify something, let me know, okay?

A I will.

Q You've already told the Court this is your first time acting as an expert witness, is that right?

A That is correct.

Q And other than the redistrictings that are generated by

...

Excerpts from Transcript of Bench Trial, Direct Examination of Dr. Jowei Chen (Oct. 16, 2017)

...

[157] MR. STRACH: Not on that, Your Honor.

JUDGE OSTEEN: All right. Dr. Chen is accepted as an expert witness in political geography and redistricting and may offer his opinion as to those matters.

MR. THORPE: Thank you, Your Honor.

BY MR. THORPE:

Q Now, Dr. Chen, just to be very clear about what your task was in the expert testimony that you're going to give here, what have the Common Cause Plaintiffs asked you to evaluate in this case?

A The Common Cause Plaintiffs asked me to evaluate two questions. First, I was asked to evaluate whether partisan considerations were the predominant factor in the drawing of the Enacted 2016 SB2 Plan; and second, the Common Cause Plaintiffs asked me to evaluate the extent to which that SB2 Plan, the 2016 Plan, complied with the nonpartisan portions of the Adopted Criteria as outlined by the Joint Select Committee.

Q And the research question isolated in this report is described at the bottom of page 1 and the top of page 2 of your report, is that correct?

A That's correct, sir.

Q As an overview -- and, of course, we're going to dive into greater detail on this -- how did you go about answering these two questions that you were asked?

A I went about answering these two questions by developing [158] and analyzing a computer-simulation algorithm which I've developed in my own academic research my published academic research that produces a large number of districting plans -- alternative districting plans produced by computer algorithm and this algorithm follows specific nonpartisan criteria that I programmed into the algorithm.

So I conduct a large number of simulations of simulated plans, independent simulations; and I analyze these simulated plans; and I compare them to the Enacted SB2 Plan along a number of measures, including, of course, the nonpartisan portions of the Adopted Criteria, as well as partisan measures.

Q And broadly -- again, we will deal with this in more detail -- what did you find as a result of conducting these simulations and evaluating them as against the enacted plan?

A Broadly what I found was that the partisan goal laid out in the Adopted Criteria, specifically the goal of creating a districting map with ten Republican seats, I found that that partisan goal predominated in the drawing of the SB2 Plan; and I found that the pursuit of that partisan goal, that partisan goal of creating a ten Republican map, not only predominated the drawing of the map, but it subordinated the nonpartisan portions of the Adopted Criteria. Specifically, I found that it subordinated the portions of the Adopted Criteria relating to avoiding the splitting of the counties, keeping counties [159] whole when possible, as well as the geographic compactness of districts.

Q And for your conclusion that partisanship predominated in the drawing of those districts, what is the basis of that conclusion as a mathematical matter?

A Sure. The basis for that conclusion, as I started explaining earlier, was I analyzed a large number of districting maps. So what I found was the SB2 Plan, the Enacted 2016 Congressional Plan, created a partisan outcome, created a partisan distribution of seats that is an extreme statistical outlier in terms of its partisanship, in terms of its creation of ten Republican seats; and that the SB2 Plan in creating this extreme 10 - 3 Republican outcome was creating an outcome that was entirely outside of the range of the sorts of plans that would have emerged under a districting process that adheres strictly to the nonpartisan portions of the Adopted Criteria.

Q To understand how you reached that conclusion, I want to take a step back. When you refer to computer-simulation techniques or to data algorithms, specifically what is it that you are describing?

A I'm describing computer-simulation algorithms that I have developed in my own academic research in which I am able to program a districting process designed to follow certain criteria that I program and ignore criteria that I want the [160] program -- the computer to ignore.

So in this particular case, I programmed in or I had the computer strictly follow the nonpartisan portions of the Adopted Criteria. In following the Adopted Criteria, I had the simulation process or the districting process ignore, for example, race

altogether. I also instructed the computer to ignore partisan considerations altogether.

Q And we'll talk about the criteria that go into those maps, but does the algorithm also generate all the data necessary to visually display an actual map created by that process?

A Yes, sir, it does. It creates actual maps, ones that you can compare to a map, an image, of the SB2 Enacted Plan or any other Congressional Plan that one might want to consider. So it creates actual districting maps for North Carolina, dividing North Carolina into 13 congressional districts.

Q And is Figure 1 in your report, which appears on page 8 of your report, an example of such a map?

A Yes, sir, it is. It is an example of a simulated map.

MR. THORPE: Okay. For the Court's benefit, we would like to introduce as an illustrative exhibit Plaintiffs' Exhibit 3041, which will allow Dr. Chen to explain how the simulation process actually yields something like Figure 1. We would move for admission of that exhibit.

JUDGE OSTEEN: Okay. So the PowerPoint is exhibit what?

...

[170] 1,000 maps, is that correct?

A Yes, sir, that's correct.

Q What criteria did you use to conduct that initial set of simulations?

A So I'll explain the criteria and, broadly, these are criteria taken from the nonpartisan portions of the

Adopted Criteria. What I broadly wanted to do was to hold several redistricting factors constant so that I could evaluate whether or not the as- enacted SB2 map conformed to these or could be explained simply in terms of it being a partisan-motivated map. So the specific criteria that I followed here in Simulation Set No. 1 were taken directly from the Adopted Criteria.

Q And when you say "the Adopted Criteria," Dr. Chen, you are referring to Exhibit 1007, which should appear at the third tab of your binder?

A Yes, sir, that's correct, the 2016 Joint Select Committee Adopted Criteria.

Q And you have referred to these earlier today as the nonpartisan criteria from the Adopted Criteria. What do you mean by that?

A What I mean by that, sir, is that this Joint Select Committee Adopted Criteria document contains both partisan, as well as nonpartisan, factors.

Now, I explained my goal in this expert report; and it was to -- in part, to evaluate the extent to which the [171] Enacted SB2 Plan conforms, adheres to the nonpartisan portion of the Adopted Criteria. So in evaluating that, I, of course, had to ignore the partisan mandates of the Adopted Criteria specifically relating to its mandate of the creation of a ten Republican, three Democrat congressional map. So I certainly ignored that portion.

As well in Simulation Set No. 1, I ignored the Adopted Criteria's mandate of protecting incumbents; and the reason I ignored that part is that even though it's not an explicitly partisan criteria, given that the 13 incumbents as of November 2016 are coming from

an existing the previous congressional map, there ' s certainly the possibility that there is some indirect partisan effect if we were to draw districts explicitly to protect those existing incumbents as of November 2016 given that they arose from the plan drawn for the 2012 and 2014 congressional elections.

So those were the portions of the Adopted Criteria I ignored in Simulation Set No. 1.

Q Dr. Chen, I'll direct you to page 6 and the top of page 7 of your report where you list criteria that the computer algorithm followed. Are these the criteria that you're referring to when you say the nonpartisan portion of the Adopted Criteria that you used to simulate Set One?

A Yes, sir. So I've listed out here on page 6 the five nonpartisan criteria that I factored, that I built into [172] Simulation Set No. 1. Specifically, the Adopted Criteria tell us, obviously, that districts have to be perfectly equally populated; second, that obviously districts have to be geographically contiguous. Those are fairly standard and not very different than for, say, other states, but the Adopted Criteria also give us very specific nonpartisan instructions with respect to No. 3, avoiding county splits.

And so the Adopted Criteria specifically tell us that, number one, if you do split a county, you cannot split it into more than two districts. You cannot split, say, Mecklenburg County or any other county into three districts or four districts. You can only split it, at most, into two districts. More importantly, the Adopted Criteria also tell us that you should avoid splitting counties when possible, that they are to be minimized, and that you can split counties when you

need to do so to create equally populated districts. So that's a third criterion.

Q And where does that criterion appear within the Adopted Criteria because you just outlined several things? I want to be able to point where in the Adopted Criteria that shows up.

A Yes, sir, in the Adopted Criteria, it's the paragraph that's labeled "Compactness."

Q Understood. In addition, your simulation algorithm introduces or, rather, measures compactness by other measures that you previously referenced with Figure 1, correct?

[173] A Yes, sir, that's correct.

Q And what are those measures?

A Sure. I just wanted to mention before I got to compactness, though, that the fourth criterion is minimizing VTD splits and the Adopted Criteria there tells us that you can only split VTDs when necessary to create equal populations, as I mentioned earlier in describing my algorithm.

And then the final one, in response to your question, sir, is about geographic compactness. So the algorithm prioritizes the drawing of geographically compact districts, and I measure that and operationalize that using two standard measures of geographic compactness that scholars of redistricting -- of legislative redistricting use very commonly in the scholarly literature, as well as in court case work. Those two measures are Reock and Popper-Polsby.

Q And those measures are described on pages 6 and 7 of your report, is that correct?

A Yes, sir, that's correct.

Q Returning to the first criterion that you referenced, I just want to be very clear about the instruction that you gave the computer in creating these simulated maps. Did you instruct the computer to conduct simulations that created districts with zero population deviation?

A That is correct, sir, I did and I found that that was very straightforward to do and so all of the districts in all of the [174] 3,000 maps that I produced for this report all have a population deviation of -- sorry -- a population in the district of either 733,498 or 99.

I mean, specifically the way that North Carolina's statewide population breaks down if you divide it across 13 districts is you need exactly four districts with 498 and then the remaining nine districts that have 499. So you're going to have four districts with 733,498 and the remaining are going to be 99. That's just how North Carolina's population breaks down and that is strictly adhered to in every one of my simulated -- 3,000 simulated plans.

Q And so as a result of how you designed that algorithm, it was not necessary on the back end of the simulations to zero out the population to meet this criteria?

A No, sir, I did not go through by hand and do any manual fidgeting with the district boundaries or the assignment of census blocks or anything like that. It was entirely automated by the computer districting process.

Q You have previously conducted other simulations of congressional and legislative redistricting, correct?

A Yes, sir, that's correct.

Q And in those previous either expert engagements or in your academic work, have you always been given a written set of criteria to follow?

A No, sir. This is quite rare.

[175] Q And what does that affect about your approach to the task in this case?

A Well, it meant my task in this particular case was unusually narrow and very mechanical, meaning the following: The Adopted Criteria here in this case give me a very specific set of criteria and my task was to not deviate from the nonpartisan portions of that Adopted Criteria. They were obviously very specific with respect to things like population equality and contiguity, but also county splits, which was quite unusual.

Usually my task in -- either as an expert witness or in my academic research is to make subjective judgments or use my expert as a redistricting expert and make determinations about how traditional districting criteria should apply in this state or that state or this jurisdiction and then try and figure out how to apply them -- how to apply traditional districting criteria given the various quirks of a particular state.

In North Carolina, in this particular case, with the Adopted Criteria as specifically as it is written, I had no subjective judgments like that to make here. My task here was very mechanical, to very strictly

follow the words that I saw on the paper of the Adopted Criteria and to follow those rules by programming them into the computer algorithm. They were even very specific with respect to the hierarchy of these [176] various criteria.

So that's what made this case so unusual in terms of my own normal academic work and expert witness work using redistricting simulations. Here I had no -- very little judgment call in deciding what districting criteria should be in or which ones should apply here. It was all very clearly laid out for me in the Adopted Criteria.

Q Do the adopt criteria also specify which election and/or demographic data is to be used in the construction of these maps or these districts?

A Yes, sir, it does.

Q And where is that specified?

A Well, the Adopted Criteria tells us which elections are to be used. I believe it's the section called "Political Data." But the Adopted Criteria tells us which elections to use in the consideration of the partisanship of the districts in achieving the stated political impact or partisan goal of the Adopted Criteria.

So specifically that "Political Data" paragraph in the 2016 Adopted Criteria tell us that the data we are to use are the following: All the statewide elections from 2000 from 2008 to 2014, but not including the presidential contests. So that is a very specific list of exactly 20 statewide elections.

Q And what you just said you have read from the first [177] sentence under "Political Data" on page 1 of the Adopted Criteria itself?

A That is correct, page 1, the section called "Political Data," and it tells us which elections to use.

Q And does that section also describe any demographic data that may be used in the construction of districts?

A It tells us to avoid using certain demographic data. It tells us to avoid using the racial composition of any of the census geographies or of any data about North Carolina. So that's pretty easy to follow. I just ignore racial data because the Adopted Criteria tell me to ignore racial data.

Q And so specifically it reads: "Data identifying the race of individuals of voters shall not be used in the construction or consideration of districts in the 2016 contingent congressional plan."

Did you follow that in your construction and consideration of the simulated districts in order to follow the nonpolitical portions of the Adopted Criteria?

A Yes, sir. I considered that to be one of the various nonpartisan portions of the Adopted Criteria. So that sentence tells me that racial data, data identifying the race of voters, is not to be used; and so I followed that by completely ignoring all racial data in constructing my computer's districting simulation algorithm.

Q And when I speak of whether you constructed districts [178] based on that result or considered that information, I am referring to the information

contained in your expert report disclosed on March the 1st of 2017?

A Yes, sir, that's correct.

Q So the political data bullet point that you just referenced includes 20 elections. Was that the only election formula that you considered for the purposes of this task?

A It was one of two different formulas that I used. There was a second one as well.

Q What is the other formula? And I will direct your attention to the next tab, which is Joint Plaintiffs' Exhibit 2002.

A This document is a document that Plaintiffs' counsel gave to me and represented to me that it was the formula produced by Dr. Tom Hofeller used for evaluating partisanship of North Carolina congressional districts while he was producing the 2016 Plan. Plaintiffs' counsel gave me this document, told me it was produced by Dr. Hofeller in evaluating the partisanship of North Carolina's congressional districts.

I looked at this formula and I found seven elections and I found it was a very straightforward formula to apply. I saw seven elections and they're really just a subset of those 20 statewide elections I mentioned just a second ago that were mentioned in the Adopted Criteria.

So Dr. Hofeller's formula lists for me seven [179] elections and it creates a very specific formula used to evaluate the partisanship of districts. I looked at it and I saw that I had access to all of this data, all seven of these elections, and I found it to be pretty

reasonable and straightforward to apply, and so I applied it as well.

Q And you've mentioned applying this formula at the district level. Is it your understanding that this formula could only work at the district level?

A No. I understand it to be a formula that was constructed by Dr. Hofeller for the consideration, for the evaluation of the partisanship of any geography. It could be the partisanship of a county or the entire state of North Carolina, of a region in North Carolina. It's just a formula that takes a couple of different elections, puts them together, aggregates the results; and all it simply does is it counts up were there more Republican votes or Democratic votes in this particular district across the seven elections. So it's a very straight forward formula that can be applied to any sort of geography within North Carolina obviously.

Q And this formula could easily be applied at the VTD level as well?

A Yes, sir. I mean, it's all data that's available at the VTD level and it's pretty clear what Dr. Hofeller was creating here.

Q Understanding that these elections were provided to you as

...

[208] BY MR. THORPE:

Q And I'll ask sort of a different version of the question and hope to make that a little bit more clear. The SB2 Enacted Plan that is reflected on all of these charts is not something that, in hindsight, you said,

well, the Republicans won ten seats, so I'm going to put them all at ten; is that correct?

A That's correct, sir. I didn't just put ten there simply because we know that there are ten Republicans elected. That was -- that was not what I did here.

Q Instead, you used the actual districts as constructed under the 2016 Plan and applied the same data that you used to evaluate your simulated districts to determine the Republican vote share for both the simulated districts and the enacted plan?

A Correct, sir. That's what we need for an apples-to-apples comparison here. So, again, I just took the enacted plan, the actual districts of that enacted p l an, and I overlaid -- because this was easily publicly available data. I overlaid the results from all of those 20 Adopted Criteria elections that we discussed some time ago. I overlaid them and calculated how did the Adopted Criteria political data evaluate the partisanship of the districts of the enacted plan, those actual 13 districts of the enacted plan. And I went through those 13 actual districts of the Enacted SB2 Plan one by one and said how does the Adopted Criteria evaluate the [209] partisanship of this district given that the Adopted Criteria already gives us a very specific set of elections to be used in evaluating the partisanship of the districts.

Q And it was your testimony a few moments ago that the districts in which you found Republican vote share exceeded Democratic vote share were, in fact, the same districts in which Republican candidates prevailed in 2016?

A Yes, sir, that's correct.

Q I want to turn your attention to Table 1, which appears on page 12 of your report. And we don't need to go through this in detail because we've largely discussed the information included in it, but is it accurate to say that Table 1 summarizes the simulation set approaches that we have discussed and the results that you -- these simulations yielded?

A Yes, sir. So it's, again, a comparison of Simulation Sets One, Two, and Three, which we've now discussed, and a comparison of those three simulation sets to the Enacted SB2 Plan, and I'm comparing all of these simulations to the Enacted SB2 Plan on a number of nonpartisan criteria listed in the Adopted Criteria.

Q And how does Table 1 display the partisan distribution of seats under both the enacted plan and the various simulation sets?

A So let's go to the very bottom of Table 1, that bottom row, that bottom row there where I've labeled it "number of [210] Republican districts under the Hofeller formula." And just to go back again to what we were talking about a minute ago, I, of course, calculated the SB2 Plan using Dr. Hofeller 1 s formula; and I found that in the SB2 Plan there are ten districts out of 13 that Dr. Hofeller 1 s formula counts as Republican districts. And I did the same formula applied that same formula to all three sets of simulations, to all 1,000 plans, maps, in these three sets of simulations, and I counted up in, say, Simulation Set No. 1, how many plans have exactly five Republican districts, how many plans have exactly six Republican districts.

This is all information that we already reviewed earlier in those histograms and those figures we went through a while ago, but it's laid out here in numerical form again here in this bottom row. So it 1 s telling us that for Simulation Set No. 1 the range of Republican districts calculated using the Hofeller formula is always between 5 out of 13 up to 9 out of 13 Republican districts using the Dr. Hofeller formula; and, of course, that is compared to the ten Republican districts using Dr. Hofeller's formula as calculated in the SB2 plan.

Simulation Set Two, that next column over, is another comparison. It tells us that all of those simulated plans in Simulation Set No. 2 are creating between nine to five -- or five to nine Republican districts; and as we said earlier, most of them are about seven Republican districts. So over half of [211] them are creating exactly seven Republican districts under the Dr. Hofeller formula.

Go to the next column, Simulation Set No. 3. It tells us another distribution like that. Here we see that in this bottom row in the very right column of this Table 1 -- what this Table l tells us there is that in Simulation Set No. 3 the entire range of the partisan seats in these 1,000 simulated plans, these 1,000 districting plans in Simulation Set Three, ranged from four to nine Republican seats; and, again, most plans had six or seven Republican seats, but the entire range went out as low as four and as high as nine, never to ten.

Q What then does Table 1 tell us or summarize about whether, in your 3,000 simulations, there will be conditions that could emerge that would explain a 10-3 Republican plan?

A Well, we evaluated -- or I evaluated a number of different possible explanations or possible alternative explanations for what might possibly justify; and as I said before, in Simulation Set No. 3 I was asking, well, is it possible that the General Assembly's choice to create exactly 13 county splits rather than minimize that number and the General Assembly's choice to protect exactly 11 incumbents, if that unique combination of features could somehow justify or explain or necessitate the creation of a 10-3 Republican map. What these simulation results, as described here in this table, [212] allow us to see pretty clearly is that such unique combinations of features of the Enacted SB2 Plan do not somehow necessitate or justify or explain why it was necessary to create an Enacted SB2 Plan with a 10-3 Republican advantage.

In other words, what it's showing here is that even if you had wanted -- for whatever reason, even if you had really wanted to create a plan with 13 county splits and just protect 11 incumbents but otherwise follow strictly the nonpartisan portions of the Adopted Criteria, even then with that unique combination you still would have ended up with a plan that generally creates six or seven Republican districts under Dr. Hofeller's formula, occasionally five and occasionally up to eight, but certainly never ten.

Q And so I want to be very clear about what this explains. You've referred to certain unique features of the Adopted Criteria and of the enacted plan. To be clear, does your approach account for the political geography of North Carolina voters and where they reside?

A Accounting for political geography of North Carolina voters was very much at the heart of the motivations for conducting all these sets of simulations. The whole point here is that what the computer is doing is it is taking North Carolina's voter geography, as laid out across all of North Carolina's counties and VTDs and census blocks, and starting with those census geographies, given their unique distribution [213] of partisan voters, their unique distribution of Democrat and Republican voters, and saying given those sets of geographies with that particular unique geography of North Carolina, what happens when we build districting plans in North Carolina that strictly comply with the nonpartisan portions of the Adopted Criteria. And so accounting for North Carolina's voter geography is at the very heart of what this analysis is doing.

Q And so are you able to conclude from this analysis that the Enacted SB2 Plan creates a partisan distribution of seats that falls entirely outside the range of outcomes possible in the absence of the partisan criteria in the Adopted Criteria?

A Yes, sir, that's exactly right. What I'm finding here is that regardless of which of these two measures of partisanship that one uses, whether we use Dr. Hofeller's way of measuring the partisanship of districts or the Adopted Criteria of elections for measuring the partisan distribution of seats, one, we see that the SB2 Plan has created ten Republican districts using either one of these measures.

Second, we see that the SB2 Plan's creation of ten Republican seats is an extreme statistical outlier in terms of its partisanship, whether measured by Dr.

Hofeller's formula or by the Adopted Criteria of elections. It's creating an extreme statistical outlier in terms of its partisanship, and that statistical outlier is entirely outside of the entire range of the sorts of plans that would have emerged under a districting [214] process that strictly adhered to the nonpartisan portions of the Adopted Criteria.

Q I will be mindful of the Court's decision to grant the motion in limine and respect that aspects of what I 'm about to discuss are principally going to be introduced by the League of Women Voters Plaintiffs, but on page 23 you begin a section that leads to the end of your report that is entitled "Robustness Checks Using Alternative Measures of Partisanship." Is that correct?

A Yes, sir, that's correct.

Q And speaking generally, what was the purpose of this section of the report?

A Generally, I wanted to conduct some robustness checks that would test and confirm the results in the main part of my report, which is everything that we've discussed up until now, the first main part of my report.

So this second section, this latter section of my report, presents a number of robustness checks that use alternative measures of partisanship of districts, meaning alternative measures in addition to and separate from, completely different from, the measures that we've been talking about with Dr. Hofeller's formula and the Adopted Criteria formula.

The reason I wanted to present these alternative robustness check measures of partisanship is that these are

...

Excerpts from Transcript of Bench Trial, Cross Examination of Dr. M.V. Hood III (Oct. 19, 2017)

...

[36] adhere to the criteria adopted by the General Assembly affect your view of the conclusions he makes in his report?

A Well, because Professor Mattingly did not rely on the criteria, I don't know how reliable his simulations are.

Q All right. And assuming Dr. Mattingly had followed the same criteria as the General Assembly, would that change your mind about the reliability of the simulations he discusses in his report?

A Not necessarily, for this reason. You know, computers are not drawing maps in North Carolina. It's a real person or a set of people that are actually drawing these maps on behalf of the General Assembly; and, again, a computer simulation cannot necessarily get at all the nuances that may be related to the criteria for the General Assembly and everything that goes into that. I don't think Professor Mattingly, for instance, talked to anyone from the General Assembly or talked to map drawers. That might have been very informative -- it might have made the simulations more realistic.

MR. McKNIGHT: I don't think I have any further questions for Dr. Hood at this point.

JUDGE OSTEEN: All right. Cross-examination?

CROSS-EXAMINATION

BY MR. EPSTEIN:

Q Good morning, Dr. Hood.

A Good morning.

[37] Q My name is Steve Epstein.

I don't think we've met before, have we?

A No, we haven't. It's nice to meet you.

Q Pleasure to make your acquaintance as well.

I have gone ahead and put together a PowerPoint to go through some of what will be my cross-examination. I'd like to pull that PowerPoint up if we can, please. Okay. Sir, we're going to start with Figure 3 from your report, the North Carolina Partisan Cluster Analysis. And with respect to Slide 3, you've made some statements, and I'm going to go ahead and read them. You tell me if I'm quoting them correctly if you would, sir. You said: "Looking at the map (Figure 3), one can see that large sections of North Carolina are occupied by either Republican or Democratic clusters." Is that fair?

A Yes.

Q You said: "North Carolina's political geography can affect the manner in which congressional districts are created." You said that, correct?

A Correct.

Q And you said: "Democrats are more likely to be found in urban areas in -- I think it should say and Republicans in rural areas," correct? "Democrats are more likely to be found in urban areas, Republicans in rural areas," which is what you said on page 13.

A Yes.

[38] Q You also said that "Clustering of partisans can lead to natural packing of such groups in the redistricting process." Correct?

A Yes.

Q And that "The presence of such spatial patterns can lead to the phenomenon where partisans are more likely to be placed together in the same district -- correct? -- sometimes referred to as natural packing"?

A Yes.

Q I mean, natural packing is where those clusters wind up in the same congressional district, correct?

A That's the idea behind that term, yes.

Q Okay. And "The state's political geography," in view of all of these things we've just talked about, "would also seem to naturally favor Republicans in the creation of Congressional districts." That's your view, correct?

A I stated that, yes.

Q All right. So I want to go ahead and look at what I'll refer to, and I'll ask if you agree with me, as the Asheville Democratic cluster. Does that green arrow to you appear to point to the Asheville Democratic cluster?

A That is Asheville, yes.

Q Okay. And what we've done, sir, is we have -- in fact, you mentioned Asheville as a Democratic cluster by a name on page 10 of your report, did you not, sir? You can look at it. [39] I'm not trying to --

A Okay.

Q -- make this a memory contest, but you can look on page 10 and see if you'll agree with me that you named Asheville as a Democratic cluster.

A I did, yes.

Q Okay. And what we've done is we've zoomed in on that Asheville Democratic cluster. Would you agree with me that that is the Asheville Democratic cluster? And if you want to take some time to compare it to your map.

A Well, I'll take your word for it.

Q Okay.

A It's quite a zoom-in.

Q If we had an ELMO, we could put your partisan cluster map on the ELMO. So, sir -- and this is I meant to do this earlier. This is Slide 5 -- I'm sorry, this is Slide 6, and for the -- the slides that we've looked at so far, in fact, have had the numbers on them, and I'll start naming the slides because I remember I should do that, for the record.

JUDGE OSTEEN: Is this an exhibit, or is this a guide, or what is this?

MR. EPSTEIN: This is to aid in cross-examination rather than having to continually pull things out. It's going to significantly speed things up, Your Honor.

BY MR. EPSTEIN:

[40] Q Dr. Hood, what we see in Slide 6 is the phenomenon that you, in your expert report, refer to as natural packing, correct?

A Yes.

Q North Carolina's political geography favored natural packing of that Democratic cluster into a

single congressional district. That's what natural packing is, correct?

A Well, I mean, more generally, it's where like partisans are clustered geographically or spatially closer together to one another.

Q And what you told me a second ago, and I can look at the quote again, is that natural packing is the phenomenon where those clusters a l so wind up in the same congressional district, correct?

A Yes, that's certainly possible.

Q Well, it's not possible, it's what you're referring to as natural partisan clustering, correct --

A Yes.

Q -- the natural path of partisan clusters. Okay. In fact, you knew, sir, looking ahead at Slide 7, that the legislature drew a line right through this Democratic cluster to split into two congressional districts; did you not, sir?

A Well, I may have done that at some point. I mean, I didn't -- when I drew my map of the partisan distribution of the state, I wasn't necessarily superimposing congressional [41] districts on it. I was looking at the state as a whole.

Q But what Slide 7 shows is that when the legislature drew its 2016 map, it drew a line through the Asheville Democratic cluster to separate part of it into Congressional District 11 and part of it into Congressional District 10. Would you agree with that, sir?

A Yes, that's what happened.

Q Okay. So you said that "Clustering of partisans can lead to natural packing of such groups in the redistricting process," correct?

A Yes.

Q "True/False: -- looking at Slide 9 -- What happened in Asheville was the legislative cracking of a Democratic partisan cluster in the redistricting process?" True or false?

A The Democratic cluster in this case did not end up in one congressional district.

Q Because it was cracked in two?

A It was split in two, yes.

Q Thank you, sir. All right. Moving forward. Did you -- what happened, looking at Slide 10, is that those two districts were submerged into two safe Republican districts. Isn't that right, sir?

A Those two districts?

Q Those two pieces of the Asheville Democratic cluster when they were cracked, when the Asheville Democratic cluster was [42] cracked in two, those two pieces wound up being submerged into safe Republican districts, isn't that right, District 10 and 11?

A One second. Yes, I have classified Districts 10 and 11 as safely Republican. I just needed to look at that real quick.

Q And, sir, as an expert in political science, as you are, especially in southern politics, including North Carolina, had that Asheville Democratic cluster been packed into a single district, the phenomenon of natural packing you describe in your report, the

district into which that cluster would have been packed would not have had results like we see on this slide, Slide 10, correct?

A Well, so what are we saying? That if the Asheville

Democratic cluster was maintained whole --

Q Correct?

A -- is that fair?

Q We wouldn't have seen results like we see on Slide 10 for the district in which that natural packing would have occurred, would we have?

A Well, the partisan composition of the district in which the Democratic cluster was contained would be different. I mean, that is true.

Q Would have been more likely that a Democrat would have had a chance to win, correct?

A Well, I mean, without looking at numbers, I can just say [43] that the partisan composition would be different.

Q More Democratic, correct?

A I -- that's true. I don't know how -- sitting here, is what I'm saying, how much more Democratic is all I'm saying.

Q All right. Dr. Hood, would you agree that another area of the state in which there is a Democratic partisan cluster happens to be all around us where we are today, Greensboro. Would you agree with that?

A I identified it, yes.

Q You identified it as a Democratic partisan cluster on page 10 of your expert report, correct?

A Yes, I did.

Q All right. And going ahead and looking at Slide 11, that identifies the Greensboro partisan cluster, both finding your map on the top right and then pulling down a blowup of that cluster on the bottom left, correct?

A Correct.

Q And then looking at it closer, would you agree that what we see in this slide is -- which is Slide No. 12 -- is, in your words, "natural packing"?

A Well, it's -- yes, it's certainly clustering of Democrats closer to one another, geographically speaking.

Q And in your words, North Carolina's political geography favored natural packing of that Democratic cluster into a single congressional district, correct?

[44] A I don't think I went quite that far.

Q All right. So you don't think that this would be an area that would make sense to put in a single congressional district because of the natural packing?

A Well, all I'm saying is I didn't make that determination. I just talked about the phenomenon of natural packing generally.

Q Do you happen to know whether this area was put into a single congressional district in the 2016 Enacted Plan?

A Well, I'm going to guess that it wasn't, but I honestly don't know sitting here.

Q Okay. Well, I'm going to show you on Slide 13 that is what happened in the Enacted Plan, that the right half of the natural partisan -- the Democratic partisan cluster wound up in Congressional District 6, and the left half wound up in Congressional District 13. That's news to you today?

A Well, I'm just saying the map I drew didn't have congressional lines superimposed on it. So I'm not shocked by this necessarily. I probably looked at this at some point.

Q Okay. And I'm going to move forward to Slide -- I'm trying to move forward. Can you help me out? There we go. Thank you. Again, you said, "Clustering of partisans -- this is Slide 14 -- can lead to natural packing of such groups in the redistricting process." And by that you're implying into a single district, correct?

[45] A Yes.

Q And going to Slide 15. "True/False: What happened in Greensboro was the legislative cracking of a Democratic partisan cluster in the redistricting process." True or false?

A The Greensboro cluster -- Democratic cluster split between those two congressional districts, yes.

Q It cracked, correct?

A Well, if you want to use that terminology, yes.

Q Okay. And then moving forward to Slide 16, did you note that those two pieces of the Greensboro Democratic cluster were submerged into districts that voted, in District 6, 59.3 percent for Republicans and, *in* District 13, 56.1 percent for Republicans?

A Well, I didn't know that before you just presented that to me.

Q But you did an analysis of the 2016 Plan, and you came to court to tell us that the 2016 Plan was essentially a plan that neutrally protected incumbents and followed the political geography of North Carolina. That's your testimony, isn't it?

A Yes.

Q Not that there was some partisan intent to create a plan that favored Republicans. That's not your testimony, is it?

A No.

Q Okay. Had the Greensboro Democratic cluster been packed into a single district, the district into which that cluster [46] would have been packed would not have had results like we see on this slide, correct?

A Well, again, what I can say definitively is that in that scenario you're offering that the district would have been more Democratic. How much more, I'm not certain.

Q All right. Let's go forward. Let me ask you whether -- before we go to the next slide -- whether another area of the state in which there's a Democratic partisan cluster is and around Cumberland, Hoke, and Robeson Counties. Is there another Democratic cluster there?

A Yes, sir.

Q And I think on page 10 of your report, you refer to that partisan cluster as an area within the black belt area of the state that runs through the southern coastal plain subregion. Did I get that right?

A Yes.

Q Okay. Let's go forward to Slide 17 and take a look. Would you agree that I have accurately pulled out of your Figure 3 that partisan cluster, namely, in Cumberland, Hoke, and Robeson County?

A It looks like it.

Q Okay. And as you say in your report, this is an area of concentrated Democratic strength, correct?

A Yes.

Q Let's go forward to Slide 18. Will you take my word for [47] it that is a tight blowup of that same area?

A I'm going to take your word for it.

Q I appreciate it. And I will tell you that Cumberland is the county on the top right, that Hoke is next to it on the left, and that Robeson is the county on the bottom. All right. Are you with me?

A Yes, yes.

Q Okay. Would you agree that what we see in this slide is, in your words, natural packing?

A It's a cluster of Democratic VTDs, yes.

Q And North Carolina's political geography favored the natural packing of that Democratic cluster into a single congressional district, did it not?

A Well, let me just say this. It could have been put into a single congressional district or not.

Q If you were trying to keep that area together of those partisans, you would have put it into single district, would you not?

A Most likely, yes.

Q Okay. Go forward to Slide No. 19 -- I 'm sorry. I just wanted to added in the Fayetteville Metro area just to help orient you. Would you agree that that appears to be the voting tabulation districts from the Fayetteville Metro area that we circled there?

A I believe so.

[48] Q Okay. Just to give us

A It's not labeled, but, yes, that's about where Fayetteville is.

Q All right. Going ahead to Slide No. 20. Can you see the green line there?

A I can see it.

Q And does it appear the legislature drew a district line right through the Robeson, Hoke, Cumberland Democratic cluster?

A Through the cluster, yes.

Q And separated into Congressional District 8 and Congressional District 9, correct?

A Yes.

Q Again, you said natural packing tends to be used by the legislature in the redistricting process in order to put clusters into the same district, right?

A I don't know that I said it was used by the legislature. I just said this is --

Q It's the political geography, excuse me.

A Yes, that's fair.

Q The political geography favors those kinds of clusters being put into a single district; fair?

A It's possible that clusters of like-minded partisans can be found in the same district, yes.

Q "True/False: What happened in Cumberland/Hoke/Robeson County was the legislative cracking of a Democratic partisan [49] cluster in the redistricting process"?

A That cluster is split between those two districts, yes.

Q And you don't have a problem with the word "crack," do you?

A Well, I don't necessarily put any kind of connotation to terms like "cracking" or "packing," for instance. Those are just terms we talk about in terms of drawing maps a lot of times.

Q Okay. You agree --

A I don't view it as positive or negative is what I'm saying. It's just a term of art.

Q You agree the legislature consciously drew a line right through that Democratic partisan cluster, correct?

A Well, there's -- yeah, there's a line there. That's certainly true.

Q That line didn't show up accidentally. The legislature drew it --

A I agree with you on that.

Q Okay. Thank you. Let's go forward to Slide 23. Did you know that the result of doing that was submerging the two pieces into districts in which Republicans won, in District 8, 56.8 percent of the vote and, in District 9, 58.2 percent of the vote? Excuse me, I think that's 58.8 percent. Did you know that that's happened to those two pieces of the Robeson, Hoke, and Cumberland Democratic cluster?

[50] A So one of these is wrong, I guess, right?

Q Do my numbers add up to more than 100 percent? I don't think so.

A Oh, no, maybe not. Maybe not. Are you asking -- I, you know -- I wasn't aware necessarily -- I mean, I guess I was aware of the congressional election outcome, yes.

Q And District 8 was overwhelmingly a Republican district as the votes turned out, and District 9 was overwhelmingly a Republican district as the votes turned out, correct?

A As the vote turned out. I've got them labeled competitive.

Q All right. And I think my colleague from League of Women Voters may ask you a question or two about that, but I'm going to ask you whether -- if the Cumberland, Hoke, and Robeson County Democratic cluster had been packed into a single district, that district would have seen results like we see on Slide 23?

A Well, no, I don't know what the results would have been, but it wouldn't have been exactly that, no.

Q Republicans wouldn't have won 58 percent of the vote in a district in which that entire partisan cluster was packed, correct?

A The Democratic vote would have been higher. I agree with you there. I just don't know the level necessarily sitting here.

[51] Q All right. I want to shift focus now from the section of your report to the section -- from the section of your report that offers opinions about partisan

clustering, we're going to move away from that topic, to the section of your report discussing the advantages of incumbency. All right?

A Okay.

Q It's your testimony, Dr. Hood, that the advantages of incumbency explain the results of the 2016 congressional elections rather than how the General Assembly drew our congressional districts, correct?

A I think how I would characterize it is that redistricting alone doesn't affect completely the outcome of congressional elections. We have candidates and campaigns, and elections are actually occurring, and the fact that there were a large number of incumbents in that election cycle did affect the outcome of those elections.

Q Doctor --

A I think that's how I would characterize it.

Q And I apologize for interrupting. I think you're actually trying to drive home the point that that was a more powerful influence on the results of the election than the redistricting. Isn't that the point you're trying to drive across?

A Well, it was certainly a powerful influence.

Q All right. You say: "Incumbents are highly likely to win [52] reelection, especially when faced with challengers of little or no political experience." Correct?

A Correct.

Q Let's go ahead and look at the rest of these on Slide 24. You said: "Of the twelve incumbent races in

2016, 10 (or 83%) featured a challenger with no political experience [.]" You made specific note of that, correct?

A Correct.

Q You said that "In every race featuring an innocent, t h e incumbent outspend -- and I think you meant to say outspent their challenger by an average of $1.2 million. 11 correct?

A Yes.

Q And then you concluded: "In conclusion, there is little doubt that factors other than redistricting ... helped produce the noted ten to three partisan division," and the most significant of those factors, you say, is incumbency, correct?

A It's a big one, yes.

Q You think that the type of -- let me ask you this. The type of candidate who might challenge an incumbent doesn't have anything to do with how the legislature draws the district?

A So who emerges to challenge an --

Q Absolutely, sir.

A It could be affected by it; it doesn't have to be.

Q Is that something that you talked about in your report anywhere, that the way the legislature draws a district can [53] have an effect on who might challenge an incumbent in that district?

A I don't believe I talked about that specifically.

Q An entrenched incumbent, you believe, is likely to draw a weak challenger no matter how the legislature draws the incumbent's district. That's pretty much what you're saying, isn't it?

A That's of tentimes the case, just in general.

Q An entrenched incumbent is going to be able to outraise and outspend a politically inexperienced challenger no matter how the legislature draws the incumbent's district, correct?

A Most of the time, yes.

Q All right. I'm going to go to Slide 25. Do you know who the gentleman in this picture is, Dr. Hood?

A I do not.

Q You've been in the redistricting field, you were qualified as an expert in redistricting, and you don't know who this gentleman is?

A I'm sorry, no.

Q All right. Did you know a gentleman by the name of Congressman Roscoe Bartlett from the 6th Di strict in Maryland for 20 years? Do you know who that is?

A I've heard the name.

Q Did you not know that there's redistricting litigation going on in Maryland about that district that's very similar to [54] the litigation you're testifying in today?

A I'm really not familiar with that case.

Q You're not?

A No. I'm sorry.

Q So you don't know what was done to Congressman Bartlett's district by the Democratic-controlled legislature in 2011 through their redistricting process?

A Again, I'm really just not familiar with that case.

Q Okay. Well, I will tell you -- and this is coming straight out of an opinion in that case, and we'll see if this affects any of your opinions -- in the words of Fourth Circuit Judge Paul Niemeyer: The changes that were made to Congressman Bartlett's district resulted in a net reduction of more than 66,000 registered Republicans and a net increase of some 24,000 registered Democrats for a swing of about 90,000 voters. And specifically that's in Docket Entry 202 on page 32. So did you follow those numbers?

A Generally, yes.

Q Okay. Did you know what effect that had on what happened in that race in terms of who challenged Congressman Bartlett?

A I'm just not familiar with this example we're talking about.

Q What would be your speculation about whether that would affect the type of challenge that might be mounted against somebody who had been winning i n a Republican district for 20 [55] years?

A Well, from what you described, I can't remember the exact partisan figures, it would have made the district probably more competitive.

Q Okay. And if a district became more competitive through the redistricting process, would that have had an impact on the type of person that might challenge him?

A It could have.

Q Would that have had an impact on the amount of spending that would occur against him?

A Well, if you have a quality challenger who can mount a more effective campaign, they may be spending more money, yes.

Q Would it surprise you to l earn under that scenario that Congressman Bartlett was outspent three to one in that congressional race despite his 20 years of incumbency?

A I just don't know much about this example.

Q Despite what you say in your expert report, a legislature can actually redraw a congressional district that places an incumbent at a disadvantage; wouldn't you agree, sir?

A That is possible.

Q And, Dr. Hood, just as a legislature can redraw district lines to invite a strong challenger to emerge, as happened to Congressman Bartlett, a legislature can also redraw district lines to discourage a strong challenger from emerging to face an incumbent; wouldn't you agree, sir?

A It's possible.

Q A legislature can insulate an incumbent against a strong challenge by making the district so lopsided in favor of t h e incumbent's party that it would be very difficult to raise money and mount a successful campaign against that incumbent. Surely, you would agree with that, wouldn't you, sir?

A It would be more difficult, yes.

Q Sir, isn't it true that there is a symbiotic relationship between the advantage of incumbency and the redistricting process?

A I'm not saying they're not unrelated.

Q They are related, aren't they?

A Well, again, I'm not saying that redistricting doesn't have any effect on congressional elections.

Q Did you note any of that in your report?

A Well, I noted it in the converse, that there are other factors beyond redistricting that can affect congressional election outcomes.

Q Did you note anywhere in your report that depending upon how the legislature draws those lines, it can influence the very things you mentioned in your report, the type of challenger who mighty emerge, the amount of spending that might occur? Anywhere in your report, did you mention that?

A I don't believe so.

Q When you look at the past voting history associated with [57] the ten Republican leaning districts, in your words, in the congressional delegation in North Carolina -- that was the ten districts that were drawn for Republicans in February 2016 would you not agree that that explains, in large measure, why strong Democratic challengers did not emerge to square off against those Republican incumbents?

A Not completely. Perhaps in some of the districts. I have some of them coded more competitive.

Q And it would also influence the amount of fundraising that the Democrats were able to -- amount

of funds the Democrats were able to raise in t hose districts, that very past voting history that you looked at to form your partisan index, isn't that true?

A Well, fundraising is related to a lot of things, including who might emerge to challenge an incumbent.

Q But it all relates to the likelihood of the success of that challenger, doesn't it?

A Well, again, you know, it's possible, yes.

Q Go ahead and look at Table 2 on page 6 of your report, which you were asked about on direct examination.

A Okay.

Q You made specific mention when asked questions by counsel that there were two districts in which zero dollars were reported as having been spent by Democratic challengers, District 3 and District 5, correct?

[58] A Correct.

Q And in f act, I think your suggestion was, well, I mean, even using data associated with those two districts would be somehow faulty because that implies that there was a real race in those districts, and there really wasn't if no money was spent. That's what you implied in your testimony, correct?

A Well, I think that I think what I said was something more along the lines of it would be harder to mount an effective challenge if no money was being spent on the other side. I think it was stated something like that.

Q Okay. Any idea of what your partisan index would show about how competitive t hose two districts were before we go ahead and look?

A Well, can I look?

Q Well, before we do, the fact that zero dollars were spent, do you think that might have some relationship to how competitive those districts were based upon past voting history?

A Its possible. It also looks like those challengers in those districts had no prior office-holding experience as well.

Q Sir, if I told you that the challenger to Congressman Bartlett, who, by the way, beat him by 21 percentage points, had no prior political experience, would that temper your testimony about how significant prior political experience is?

A No, I'm not saying it's not possible for a political [59] novice to beat an incumbent. That's just not the general pattern.

Q All right. Let's go ahead and look in your partisan index on page 25, Table 12, and just confirm how you classified those two districts in which the Democrat did not spend any money.

A Okay.

Q How did you classify them?

A Those are safely Republican districts.

Q Democrats aren't going to put a lot of money in challenging incumbents in safe Republican districts, are they?

A You mean the national party, for instance?

Q National party, state party, yes, sir.

A Probably not, no.

Q And people who contribute to campaigns tend to contribute to campaigns that have more of a chance of being successful than would have been the case i n Districts 3 and District 5; would you agree with that?

A That's one of the factors, not the only factor.

Q All right. I want to focus us on the topic of district core retention. In a second, we're going to go back to the PowerPoint, so if you can get me back on the slide we were on in the PowerPoint.

District core retention. I want to make sure we're clear on what you mean by "district core retention." That is the percentage of constituents in the new district that were [60] previously in that same district prior to redistricting, correct?

A Yes.

Q The higher the core retention, the more incumbents from 60 those districts are protected. That's your testimony, correct?

A The more -- yeah, the more prior constituents that an incumbent would have.

Q And you believe that other than the newly created 13th Congressional District, the General Assembly did a good job of district core retention in its 2016 Plan, correct?

A I think I said "generally," yes.

Q And I think you testified in your deposition something along the lines that a 50 percent core retention evidences the General Assembly's desire to protect incumbents, correct?

A I don't remember the exact figure.

Q Do you want to look at your deposition?

A No, not necessarily.

Q You can answer that question today. Is it your testimony that a 50 percent core retention is a generally generally a good mark that -- of the district core that's been maintained?

A Yes, that's a good indication that the core's been maintained, yes.

Q And I have Slide 27 up on the screen. That is your Table 9 from your report, correct?

A Right.

[61] Q And you believe that this table actually demonstrates the General Assembly did a good job of retaining district cores of 12 of 13 congressional districts, obviously not 13, correct?

A Right.

Q And that's one of the main reasons why in your opinion all of the incumbents defeated their challengers, correct?

A It's one of the reasons.

Q I'm going to go to Slide No. 28. I'll represent to you, sir, that the 51 percent district core retention for Congressional District 6 in Maryland comes straight out of, again, Judge Nierneyer's opinion in that case; and if you don't want to take my word, we can look at that together, but I will tell you that that's what the opinion says that the district --

JUDGE OSTEEN: Hold on just a second.

(Discussion between judges.)

JUDGE OSTEEN: You can continue.

MR. EPSTEIN: Thank you, Your Honor.

BY MR. EPSTEIN:

Q We were just looking at the 51 percent -- first of all, will you take my word for it that that was what Judge Niemeyer's opinion in that Maryland case said was the core retention for Congressman Bartlett's district?

A Well, I'm going to have to. I'm not familiar with that case.

Q Okay. Assuming that to be true, and assuming that he lost [62] by 21 percentage points in his race as an incumbent of 20 years, would you agree that a number like 51 percent wouldn't necessarily be a good indication that at that level an incumbent is somehow protected or insulated against a strong challenge?

A What I would say is that that -- you know, again, that's a specific example where 51 percent didn't necessarily protect this incumbent. Again, generally, though, the higher the core retention, the more the incumbent's protected. That's the general pattern.

Q So a number like 98 percent or 97 percent, that's a good indication, correct?

A Well, that would be a better indication, yes.

Q Right. But we have in North Carolina in the 2016 Plan, your chart, core retention levels in the 6th District, 50 percent; in the 8th District, 42.4 percent; in the 9th District, 39.3 percent; in the 12th District, 52.1 percent; and in the 13th District, 0 percent. Those are not necessarily badges of a good core retention; would you agree?

A Well, there's a range there, certainly.

Q All right. I want to move into -- and I'm done with the PowerPoint. Thank you. I want to move into your discussion about Dr. Mattingly both today and in your second expert report.

But, first, in your first report, you wrote in your [63] penultimate paragraph that, quote, the question of what constitutes an unconstitutional partisan gerrymander in my opinion is not resolved by running a set of hypothetical districting simulations. That's what you wrote, correct? It's the penultimate paragraph of your initial report.

A Hang on just a second. This is in response to Professor Mattingly?

Q No, your initial report, the penultimate paragraph?

A Sorry. Okay. I see that.

Q Okay. Dr. Hood, you didn't actually look at any of the underlying data Dr. Mattingly used to create his ensemble of 24,518 simulated maps, did you?

A That is correct.

Q The fact of the matter is, you didn't do any analysis one way or another whether running hypothetical districting simulations speaks to the question of what constitutes an unconstitutional partisan gerrymander, did you?

A I did not run any simulations, that's correct.

Q And you didn't do any analysis of whether or not doing so speaks to the question of whether or not there has been a partisan gerrymander, correct?

A Correct.

Q All right. And you, therefore, have no ability to critique the data on which Dr. Mattingly relied or the method by which he created the 24,518 simulated maps, do you?

[64] A Well, I think I can critique the assumptions he made.

Q And we'll look at those.

A Okay.

Q But with respect to the data themselves, you can't critique those, correct?

A I did not look at the data he used.

Q And you can't critique the math or the algorithm or anything like that in terms of whether he ran those functions on the computer in a proper manner, can you?

A That's correct.

Q All right. You are critical of Dr. Mattingly for applying redistricting criteria from House Bill 92 as adopted by one house of the legislature in 2015 rather than the Adopted Criteria from February of 2016, correct?

A Correct.

Q You're critical of him for not using criteria which included an explicit directive to the mapmaker to make reasonable efforts to maintain a 10-3 Republican advantage, correct?

A He didn't build that in, no.

Q You're critical of him for not applying a set of criteria that included as one of its central components that the legislature was going to try and make the plan a 10-3 plan. You think he should have used those

criteria to determine whether or not there was inappropriate partisan gerrymandering?

[65] A I think what I said is he didn't use the incumbency protection component to the plan.

Q You 1 re very critical of Dr. Mattingly for allowing plans in his ensemble to have a population deviation as high as 1 percent. I think you testified to that, correct?

A That is correct.

Q You consider that to be a faulty premise making the inferential value of his 24,000 maps, in your words, highly questionable, correct, page 2 of your report, your second report?

A Okay.

Q Do you agree that's what you said?

A Could you -- I'm on page 2. Just tell me what paragraph.

Q It's the second sentence of the second paragraph. Go ahead and read out loud what you have there.

A The second sentence, the second full paragraph?

Q On page 2, sir.

A To my knowledge?

Q These plans, however -- I'm sorry. It's -- the pages aren't numbered. It's the second page, though, of your -- do you want to get that up on the screen?

A Okay. I'm sorry. I'm on the second page.

Q The second page that says "Response to Professor Mattingly"?

A Yes, yes.

[66] Q We're looking now at the second paragraph, second sentence. Can you read that aloud, please?

JUDGE BRITT: That's the first page, isn't it?

MR. EPSTEIN: Well, there's a cover page, and then there's the first full page.

THE WITNESS: Oh, okay. I was on a different page.

BY MR. EPSTEIN:

Q No problem.

A "These plans, however, are based on a set of faulty premises thereby making their inferential value highly questionable."

Q That's your central position about Dr. Mattingly's work, correct?

A Yes.

Q Did you not see in Dr. Mattingly's report that the more -- that more in the more than 300,000 districts in his ensemble, 300,000 districts comes from 13 times 24,000, the mean population deviation was actually only .16 percent? Did you not see that in his report?

A I believe I saw, that yes.

Q You focused on 1 percent in court today, .16 percent --

A I think that's the parameter he used, from what I remember.

Q And did you not he realize that the General Assembly's enacted plan actually had a population deviation across [67] districts of .68 percent before the VTDs were split in order to achieve equal population?

A Did I realize that?

Q Yes, sir. That was in Dr. Mattingly's report. Did you not read it?

A Yes, I read it.

Q Okay. So his mean population deviation was .16. The General Assembly's population deviation before VTDs were split to finally get to zero was .68, and you believe Dr. Mattingly created an ensemble that was a faulty premise and created, therefore, highly questionable results. That's what you're saying.

A Yes, I don't agree that he used the proper population deviation number.

Q And you know that it's typical for map drawers to draw a plan with a close percentage of equal population and then zero it out. That's the way this process works, isn't it, sir?

A I'm aware of that, yes.

Q And you don't know from talking to people who draw maps whether in their experience the zeroing out process is significant in affecting the outcome of the redistricting?

A Well, I do know that it's -- it is difficult when you get down to the nitty- gritty of a zero deviation plan to -- you' r e essentially sometimes having to split blocks across districts.

Q But in terms --

[68] A I'm just saying it's not as easy as it sounds sometimes.

Q And that really wasn't the focus of my question. The focus of my question is when you get down to that nitty-gritty level, as you've described it, it really has

no difference on the partisan outcome of an entire congressional district, does it, sir?

A Not the entire district. I t's going to change it a little bit one way or another.

Q When we're talking about hundreds of people in a district that has over 700,000?

A Well, you know, again, it depends on how many VTDs you might have to split when you got down to that level.

Q And you also know that Dr. Mattingly did some sensitivity testing around this very question of what would happen to his ensemble as you require the maps to be closer and closer to equal population. You know that, correct?

A I believe I read that, yes.

Q And he reported that those results of that sensitivity testing, quote, support our claim that splitting VTDs to achieve less than a 0.1 population deviation will have a negligible effect on our conclusions. You read that in his report, did you not, sir?

A I believe he stated that, yes.

Q And you have no basis to challenge that assertion, do you, sir?

[69] A Not that assertion he makes.

Q You 1 re also critical of Dr. Mattingly for creating, and I think you said this today, two districts that have BVAPs in excess of 40 percent and in excess of 30 percent, black voting-age population. You're critical of him doing that, correct?

A Yes.

Q You consider that to be one of the faulty premises that make the inferential value of his 24,000 maps highly questionable, do you not?

A Yes, I discuss that.

Q And that's despite knowing that the General Assembly's 2016 Plan that we 1 re here in court about this week resulted in one district with over 40 percent BVAP and another with over 40 percent BVAP, correct?

A That's what it ended up as, yes.

Q And Dr. Mattingly did something wrong by including that exact same set of criteria in his simulated maps?

A Well, again, my understanding is that race wasn't considered as part of the criteria. That's what happened. You're right. That's how it ended up, but he set that parameter up front.

Q And so the fact that the legislature got there through some different way means Dr. Mattingly's maps that achieved the exact same result are somehow defective?

[70] A Well, I just don't agree with the way he did it, no.

Q And Dr. Mattingly actually tested to see if applying h is BVAP threshold changed his result and found that it did not, correct?

A I believe he states that, yes.

Q And you don't have any reason to doubt the accuracy of the analysis he did regarding that, do you?

A I don't have any reason to question what he said there at that point, no.

Q All right. Earlier today, you told us that in deciding how to get the votes into his hypothetical districts in his 24,000 maps that Dr. Mattingly relied on the 2014 and 2016 congress election outcomes. Do you remember testifying to that a few minutes ago?

A Yes, if I -- yes, I was testifying from memory, so I think that's correct.

Q And you were critical of him doing that, in part, because if there was no actual contest in one of those elections, in one of those congressional districts, that would skew the data, correct?

A That would be a problem, yes.

Q So you didn't pick up on the fact that Dr. Mattingly excluded the 2014 congressional election for precisely that reason. You didn't realize that.

A I didn't remember it.

[71] Q And you fault him for applying the actual 2016 votes in congressional races to predict the outcome of what would have happened in congressional races?

A Yes.

Q Instead, he should have applied results from insurance commissioner and agricultural commissioner like you did in your partisan index?

A Well, I created a partisan index, and those were some of the races I used, yes.

Q Your partisan index also assumes that candidates don't matter, isn't that right?

A It assumes that they do matter. But in creating an index, hopefully, these candidate effects are going

to average out so we'll get a pretty good fix on what the partisan composition of an area is.

Q And the likely outcome of elections in each of those areas, correct?

A Well, it's I would say the likely partisan composition of the area, which can affect the election outcome, yes, but sort of one step back from what you're saying.

Q Well, you know, sir, that Dr. Hofeller, who actually was the mapmaker drawing these districts, assembled the results of seven prior statewide elections to decide how to sort voters into districts, correct? You know that?

A Dr. Hofeller created his on partisan index, yes.

[72] Q And you know that Dr. Chen, because you studied his work, concluded that Dr. Hofeller's sorting, using his own index of prior statewide elections, predicted an outcome before the plan was enacted of a 10-3 split in favor of Republicans. You know that, correct?

A I think I read that in Dr. Chen's report, yes.

Q So Dr. Hofeller was able to draw a 10-3 map using past elections data that had nothing to do with the candidates who were actually running in our 13 congressional districts, correct?

A He was not using congressional election data, that's correct.

Q Or the candidates who had anything to do with the 2016 congressional elections, correct?

A Yes, those were different races.

Q And he accurately predicted what the outcome was going to be without knowing that, didn't he?

A Without knowing?

Q Without knowing who the candidate were going to be.

A Well, at that point, yes, we didn't know exactly.

Q But you consider it a flaw in Dr. Mattingly's work to assume that the specific candidates running those districts wouldn't make an appreciable difference in the outcome; that's what you're saying?

A No, I think candidates matter. I think a general -- a [73] general partisan index is better than using the congressional elections in that example is what I'm saying.

Q Sir, you're also critical of Dr. Mattingly for the number of counties split in his 24,000 simulated maps, aren't you?

A Yes.

Q You consider his -- the work he did on county splits to be a faulty premise making the inferential value of his 24,000 maps highly questionable, right? Again, I'm going back --

A I do talk about county splits. That's certainly true.

Q Okay. Did you know that among Dr. Mattingly's 24,000 simulated maps, the median number of counties split was 21?

A I don't think I knew that, no.

Q Do you want to look at his report to see if you'll agree with me on that? We can pull it up.

A Okay.

Q All right. Let's pull up --

A I just said I don't recall that here.

Q I'm sorry. When I say "report," I am referring to -- let me ask you this. Were you not supplied with the May 8, 2017, version of Dr. Mattingly's analysis called "Redistricting: Drawing the Line"?

A Yes.

Q Okay. If you can, please pull up Figure -- it's page 22, Figure 9, and it's the right-hand side. Page 22. There we go. If you zoom in on the right-hand chart there. Thank you.

[74] Looking at that histogram, would you agree -- would you quibble with me i f I told you that the median number of counties split in his 24,000 maps was 21?

A That looks to me pretty close, yes.

Q And you didn't take note of that a t any point in time before just this minute?

A No, I didn't say that. I just said I couldn't recall that number exactly.

Q Okay. Do you think that's too many to make his ensemble a valid ensemble?

A Well, there were fewer in the actual plans.

Q How many plans were split in the 2011 Legislative Plan, sir?

A One second. 2011 Plan? Forty.

Q Okay. And so Dr. Mattingly's ensemble basically sliced that number in half, correct?

A Yes, that would be correct.

Q That's a pretty significant improvement, wouldn't you say?

A It's a 50 percent improvement, approximately.

Q And, in fact, when you discussed county splits in your report, you found that the 2016 Plan was a marked improvement on this measure, isn't that correct? That was how you judged the effectiveness of county splits, it was a marked improvement?

A Over the 2011 Plan, yes.

[75] Q And Dr. Mattingly's 24,000 simulated maps with a meeting of 21 counties a l so represented a marked improvement over the 2011 Plan; would you not agree?

A It was an improvement, yes.

Q Cutting it in half would be a marked improvement; would you not agree?

A Significant improvement.

Q Dr. Hood, are you a college basketball fan?

A More college football. Sorry.

Q My example, because we all associate basketball as being the primary sport around these parts, is that --

JUDGE OSTEEN: Speak for yourself on that, counsel.

BY MR. EPSTEIN:

Q Dr. Hood, if the UNC Tarheels -- they play two games against Duke every year. If they go down to Duke, and they play them in game one, and they get clobbered by 50 points in that first game, and then in game two they come back to Chapel Hill, and on that

game they only lose by, let's say, 25 points, do you think that would be some kind of measure of success that they only lost by 25 points in the second game?

A Well, in sports, a loss is a loss.

Q Well, let 1 s take that analogy and use it to filter -- as a filter to review some conclusions in your report. On page 24 of your report, your main report -- so if you can go there, follow with me.

[76] A Okay.

JUDGE OSTEEN: Before we do this, how much longer do you anticipate?

MR. EPSTEIN: My guess is 5 minutes, somewhere in that range.

JUDGE OSTEEN: Let's finish up.

BY MR. EPSTEIN:

Q All right. So page 24, you state that "Compared to the 2011 Plan, the current districts show considerable improvement in terms of compactness. The current plan also demonstrates significant improvement over its predecessor in terms of maintaining communities of interest and in keeping VTDs intact." Do you see that?

A Yes, yes.

Q You're actually using the 2011 Plan as some sort of benchmark by which to judge the 2016 Plan, are you not?

A I'm making that comparison, yes.

MR. EPSTEIN: May I approach to grab the easel and a blowup, Your Honor? Thank you.

BY MR. EPSTEIN:

Q All right. Let the record reflect I have placed on the easel Plaintiff's Exhibit 2001. Are you familiar with what Exhibit 2001 is, Dr. Hood?

A I believe it's the benchmark plan.

Q 2011?

[77] A Yes, what I would call the benchmark.

Q Okay. And you used it as a benchmark, did you not, sir.

A A comparator, yes.

Q It did a very poor job of creating compact districts, didn't it?

A Many of those districts are not very compact. I've got the numbers in my report.

Q It did a very poor job of keeping counties whole, didn't it?

A There were quite a few county splits, yes. I think -- 40, I think.

Q It did a very poor job of keeping communities of interest intact, didn't it?

A Using counties as a proxy for communities of interest, yes.

Q It also double-bunked four incumbents, all Democrats, didn't it?

A There were some incumbents paired. I can't remember the exact number.

Q Would you accept my word for it that four Democrats in total were double- bunked?

A I don't have any reason to question it.

Q We're actually here this week because that plan had to be redrawn because it contained districts that were held to be unconstitutional, correct?

[78] A That is correct.

Q And, yet, despite all of these significant deficiencies with the plan that we see in front of us, Plaintiff's Exhibit 2001, you actually used it as a benchmark against which to test and judge the reasonableness of the legislature's 2016 Plan, correct?

A Correct. I mean, that's what usually occurs in these kind of comparisons.

MR. EPSTEIN: Thank you, sir. I have no further questions.

JUDGE OSTEEN: All right. Let's take a 15-minute recess. We'll come back.

MR. EPSTEIN: Your Honor, before we do, I'm very sorry. I would like to -- I've marked this exhibit. I would like to hand it to Your Honors. I know it's not our case at this point. But just as a mental note, we would like to come back and move admission of the PowerPoint as a demonstrative exhibit when we return to our case-in-chief, and it's Exhibit 3042.

JUDGE OSTEEN: Is there any objection?

MR. McKNIGHT: We don't have an objection to it coming in as a demonstrative.

JUDGE OSTEEN: Okay. We'll deal with it when we come back.

(At 10:18 a.m., break taken.)

[79] (At 10: 36 a.m., break concluded.)

MS. RIGGS: Thank you, Your Honors.

CROSS-EXAMINATION

BY MS. RIGGS:

Q Good morning, Dr. Hood.

A Good morning.

Q You've been hired by North Carolina State Defendants to defend election laws enacted by a Republican-controlled North Carolina General Assembly before, correct?

A Correct.

Q In *Covington v. North Carolina*, you testified on behalf of the State Defendants who are arguing that the 2011 State Legislative Redistricting Plan was not a racial gerrymander, right?

A Correct.

Q But the Supreme Court unanimously found that 28 of those state legislative districts were unconstitutional racial gerrymanders, correct?

A Correct.

Q In *North Carolina NAACP v. McCrory*, you testified on behalf of the State Defendants who were arguing that the 2013 Election Omnibus Law didn't violate the constitution or the Voting Rights Act, correct?

A Correct.

Q But the Fourth Circuit struck down that law as

...

Excerpts of Deposition Transcript of Thomas B. Hofeller (Jan. 24, 2017)

...

[115] MR. FARR: I would like for it to be marked.

MR. BONDURANT: That suits me. Let's make it 16A.

(WHEREUPON, Plaintiffs' Exhibit 16A was marked for identification.)

BY MR. BONDURANT:

Q Turn to Paragraph 23. Read Paragraph 23 aloud.

A "Political control of the redistricting process can also become an overarching factor. This is especially true when control shifts between the two political parties.

"This was the case in North Carolina when, in 2010, the Republicans took control of both chambers of the General Assembly (since the Governor has no role i n North Carolina redistricting).

"Politics was the primary policy determinant in drafting of the New Plan. The same was true of the Old Plan except that the Democrats political policy choices were different. Professor Ansolabehere did not take any of these [116] factors into account in his report."

MR. FARR: Can I see that, please, before we have questions on it.

BY MR. BONDURANT:

Q I want to focus on a specific sentence. Is it true, as you stated in your first expert report, in 2011, politics was the primary policy determinant in

drafting the New Plan, referring to the 2011 Congressional Redistricting Plan?

A I said it. It's true. I said it. Yes.

Q And your instructions in that regard came from Senator Rucho and Representative Lewis?

A Well, I think this was actually my -- my statement rather than their statement, but politics was certainly a major factor, absolutely. It is in every redistricting.

Q And would you turn to Paragraph 40.

A Thank you.

Q In Paragraph 40, you said, in part:

> "The General Assembly's goal was to increase Republican voting strength in New Districts 2, 3, 6, 7 and 13. This could only be accomplished by placing all the strong Democratic VTDs in either New Districts 1 or 4."

...

[127] concentrating Democratic voting strength in Districts 1, 4 and 12," and you again site Map 3 attached to your report. Did I read it correctly?

A Yes.

Q Was that the strategy which you as the principal architect of the map followed in achieving the Republicans' primary goal?

A In that plan?

Q Yes.

MR. FARR: Objection.

THE WITNESS: Yes.

MR. BONDURANT:

Q And so you had said previously that you wanted to create districts in which Republicans would have an opportunity to elect Republican candidates, correct?

A Correct.

Q And conversely, you want to minimize the number of districts in which Democrats would have an opportunity to elect a Democratic candidate?

A Correct.

Q And you did that by concentrating as many Democratic voters as possible into three specific districts, 1, 4 and 12?

[128] A Correct.

Q And removing as many Democratic voters as you could from the districts that you wanted to create as districts in which Republicans would be elected?

A As many as was reasonably possible, yes.

Q And the Democrats who remained in the districts that you had decided would be Republican opportunity-to-elect districts, those Democrats' opportunities to elect a Democratic candidate of their choice would be diminished, would they not ?

MR. FARR: Objection.

THE WITNESS: It would depend on what their choice was.

BY MR. BONDURANT:

Q Their opportunity to elect a Democratic candidate in the districts in which you increased Republican voting strength would be diminished, would it not?

A Yes.

Q Did you use the same strategy of assigning voters to the districts that you wanted to be Republican opportunity-to-elect districts based on their voting history in the 2016 [129] reapportionment as you did in 2011 ?

A It was a strategy, but it was not the principal strategy.

Q What was the principal strategy?

A The principal strategy was to follow criteria which would draw a plan which would be acceptable to the Court.

Q The criteria that you followed in 2016 were written criteria, were they not?

A The committee in 201 6 -- we're talking about 2016?

Q Yes.

A -- adopted a criteria statement.

Q And did you follow those criteria?

A Yes.

Q Did you have a hand in drafting t hose criteria?

A Not in the formal sense, no. I may have discussed it with probably did discuss it with the chairman.

Q Did you --

A I couldn't have proceeded on the plan without their instructions on what criteria I was supposed to follow.

Q Did you start working on the plan before the criteria were approved by the committee?

...

Excerpts of Deposition Transcript of Rep. David Lewis (Jan. 26, 2017)

...

[170] Q. No, that's okay.

A. Back in your House testimony -- May I ask my attorney a question. I don't mind you listening to what I'm going to say.

It might be possible to ask my staff, Mark, to see if the meeting with the governor's people can be pushed back. I know he's not finished. I don't mind trying to get this done today.

MR. FARR: How much time do you think you need?

MR. THORPE: Significant enough that --

MR. BONDURANT: I think you probably ought to go with the meeting and we'll split it and come back if we need to.

THE WITNESS: Yes, sir, I'll be more than glad to do that.

I'm sorry, I've tried to answer the questions that you have, and I'm sorry that I asked you to stop them.

MR. BONDURANT: You've done the best you can. We work together on this.

BY MR. THORPE:

Q. In your House floor session testimony, which is from the 19th and that we were previously in -- [171] this is on Page 34.

A. Yes, sir.

Q. -- you sort of expand on what you have previously discussed as a rationale f or the partisan advantage criteria. On Line 16 you say:

"I will tell you that the committee adopted the criteria -- adopt criteria, one of which was to seek partisan advantage for the Republicans. Now, if you ask me personally if I think that is a good thing, I will tell you I do.

"I think you are a great man."

You are referring to the person asking the question.

"I think you are a fine public servant. I think electing Republicans is better than electing Democrats. So I drew this map in a way to help foster what I think is better for the country."

Now, earlier you testified that partisan politics is just an inevitable consideration in redistricting. Here it seems like you are testifying that maximizing Republican advantage has a separate benefit.

[172] MR. FARR: Objection to the form.

I also would like to point out that he's referring to Representative Martin. I'd like to make that clear because I think he's a great guy too.

THE WITNESS: So would you ask the question again.

BY MR. THORPE:

Q. Does this testimony provide in your view a reason for partisan advantage as a criteria in the 2016 redistricting?

A. I stand by this statement. I would point out only that it may have been said in a little more cavalier fashion than was dignified on the House floor.

Representative Martin and I, although we're political adversaries, are personal friends. I've been to his home.

This was more the kind of conversation that we should have had outside and not on the floor, but, yes, I mean, I stand by what I said.

Q. And then on Page 37, Line 18, you're asked again by Representative Martin:

"Are there any race s that are not listed on these charts that the mapmakers [173] considered?"

And I assume that Representative Martin is there referring to the stat pack that contains the basket of races we've been discussing; is that correct?

A. He was.

Q. And your response is: "No, sir"?

A. Which is accurate.

Q. And you did not consider any other races and you did not instruct Dr. Hofeller to consider other races?

A. Correct.

Q. Did you instruct Dr. Hofeller to use all of the races that were provided in the stat pack?

A. No, I did not.

Q. At Line 3 of this same page, Representative Martin asks you:

"Representative Lewis, would it be accurate to say that the mapmakers considered every one of the races

that's listed in the charts that were presented at committee several times."

And you respond: "Yes, sir."

Is that correct?

A. I did respond to that by saying "Yes, sir." [174] Looking back, perhaps the answer would have been "I assume so" or "I think so."

Q. When did you learn that not all the races listed in those charts were used in constructing the 2016 maps?

A. Well, to be candid, I don't know that I ever learned that. I'm just saying when I looked at the maps, to make it simpler for me, Dr. Hofeller would just turn on the Tillis-Hagan thing. I don't really know what he looked at.

Q. You did not instruct and the written criteria do not instruct ever y one of the races to be used?

A. That's correct.

Q. You have testified a couple times today that partisanship is an inevitable part of the redistricting process.

Is that a correct assessment of your testimony?

A. Yes, sir.

Q. And -- well, I'll just -- if we could mark as Exhibit 41 a printout of a recent news article that I will ask you about a quote. And then this is on Page 4, but if you want to take a minute to read through the article, I have, of course, no objection.

[175] (WHEREUPON, Plaintiffs' Exhibit 41 was marked for identification.)

THE WITNESS: No, I'm fine.

BY MR. THORPE:

Q. So on Page 4, beneath the large block of space, you are quoted as saying:

"I think partisanship is an inherent part of who we are, and I think it will always have some role in the decisions that we make and that includes redistricting. It should not be a predominant factor, but it will always be a factor. Whether you acknowledge it or not, it will always be a factor, and to not acknowledge that is either naive or dishonest."

Were you accurately quoted in this article?

A. Yes.

Q. And do you stand by that statement?

A. I do.

Q. When you say it's an inherent part of who we are, what do you mean?

A. We're all the sum of our parts. The collective being of my political lens that I apply to taxes [176] or to spending or to whatever is going to largely reflect the Republican label behind my name. So I -- when I make decisions, that is the honest way to reflect the lens or the method by which I make those decisions.

Q. And how does that belief that it's an inherent part of who we are translate to the redistricting process that you reference in this quote?

A. While you only divide -- you know, you've got to do the one-person, one-vote thing. It would be dishonest and naive of me to say that where you put a line in X county may not affect the balance of a congressional district. So if I have a different political

philosophy or I have no political philosophy that I'm willing to acknowledge, still whatever you put a line for whatever purpose will have political impact.

I just -- it would be easy -- believe me, I want to embrace and be able to say that I think the non-partisan thing is a great thing. People love to hear about that.

I think it's more honest to say I'm going to follow the law, and I'm going to follow everything that's required of me by the law, [177] but if there is a -- if there is a discretionary decision to make, I will make it through the lens of an elected Republican.

Q. And do you consider the inclusion of partisan advantage as a criteria in the 2016 Contingent Congressional Plan -- used to adopt the 2016 Contingent Congressional Plan such a discretionary decision?

A. Yes.

Q. Do you consider any of the other criteria in the 2016 adopted criteria a discretionary decision?

A. Largely, yeah. I mean, you can draw -- you know, I chose to apply the definition of compactness that I believe, which is trying to keep as many counties whole as we can. If I had not had that as a goal, I think we could have still drawn a pretty map; it just -- maybe it's just stripes through the state. I don't know.

I think that these -- these -- other than the equal population that these were considered and balanced and harmonized together and produced a map that to the eye of a judge I think they recognized that we tried

to follow the instructions they gave us, which were very limited.

...